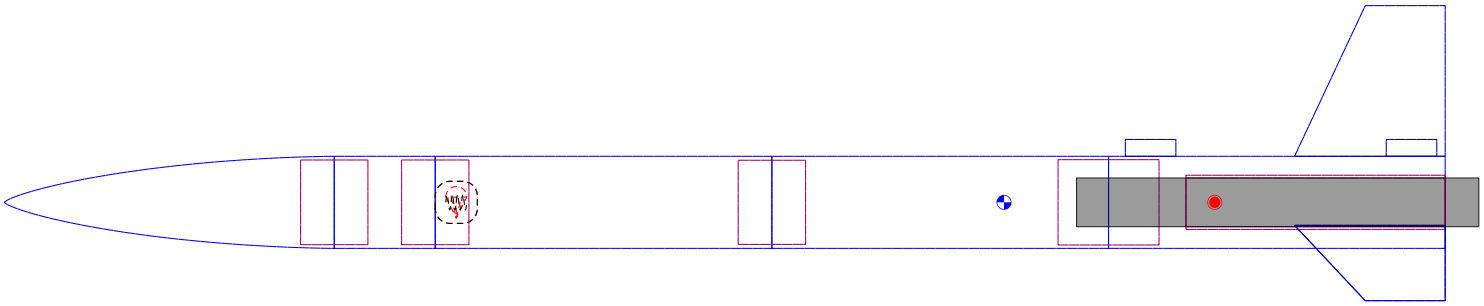
Rocket Design



Rocket

Stages: 1

Mass (with motor): 1016 g

Stability: 2.29 cal

CG: 59.4 cm

CP: 71.9 cm

G40W-7

Altitude	360 m
Flight Time	43 s
Time to Apogee	8.75 s
Optimum Delay	6.5 s
Velocity off Pad	11.9 m/s
Max Velocity	84.6 m/s
Velocity at Deployment	6.27 m/s
Landing Velocity	10.7 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
G40W	46.3 N	2.13 s	74.3 N	99 Ns	5.40:1	53.8 g	29/124 mm

G80-7

Altitude	519 m
Flight Time	58.7 s
Time to Apogee	9.59 s
Optimum Delay	7.97 s
Velocity off Pad	14.7 m/s
Max Velocity	123 m/s
Velocity at Deployment	9.81 m/s
Landing Velocity	10.7 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
G80	77.9 N	1.71 s	99.4 N	133 Ns	9.02:1	62.5 g	29/128 mm

F15-4

Altitude	74 m
Flight Time	13.1 s
Time to Apogee	5.79 s
Optimum Delay	2.4 s
Velocity off Pad	5.55 m/s
Max Velocity	26.3 m/s
Velocity at Deployment	19 m/s
Landing Velocity	10.5 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
F15	14.5 N	3.42 s	25.3 N	49.6 Ns	1.73:1	60 g	29/114 mm

F62T-9

Altitude	162 m
Flight Time	19.5 s
Time to Apogee	6.02 s
Optimum Delay	5.05 s
Velocity off Pad	11.7 m/s
Max Velocity	56.3 m/s
Velocity at Deployment	24.6 m/s
Landing Velocity	10.8 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
F62T	58 N	0.993 s	67.6 N	57.6 Ns	6.87:1	25 g	29/99 mm

H180W-10

Altitude	770 m
Flight Time	80.1 s
Time to Apogee	11.1 s
Optimum Delay	9.8 s
Velocity off Pad	22 m/s
Max Velocity	182 m/s
Velocity at Deployment	3 m/s
Landing Velocity	11.2 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
H180W	163 N	1.3 s	306 N	212 Ns	16.36:1	123 g	29/239 mm