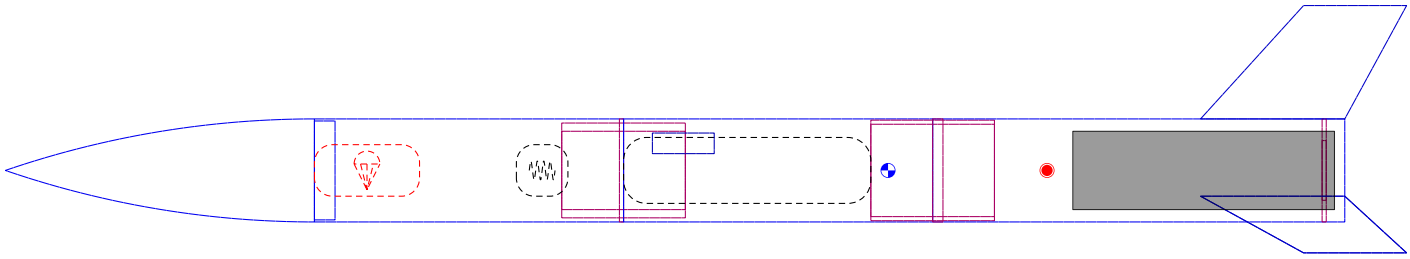
Rocket Design



Foguete

Stages: 1

Mass (with motor): 677 g

Stability: 1.54 cal

CG: 42.8 cm

CP: 50.6 cm

F30FJ-7 TALVEZ FAÇO ESSE

Altitude	289 m
Flight Time	50 s
Time to Apogee	8 s
Optimum Delay	6.5 s
Velocity off Pad	11.4 m/s
Max Velocity	76.7 m/s
Velocity at Deployment	6.92 m/s
Landing Velocity	6.96 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
F30FJ	30.4 N	1.55 s	38.2 N	47.1 Ns	6.11:1	31.8 g	24/90 mm

I161W-13

Altitude	1649 m
Flight Time	216 s
Time to Apogee	15.3 s
Optimum Delay	13 s
Velocity off Pad	22.4 m/s
Max Velocity	324 m/s
Velocity at Deployment	2.14 m/s
Landing Velocity	7.93 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
I161W	160 N	2.08 s	212 N	333 Ns	20.16:1	190 g	38/191 mm

G69-SF-10

Altitude	714 m
Flight Time	101 s
Time to Apogee	11.5 s
Optimum Delay	9.93 s
Velocity off Pad	16.4 m/s
Max Velocity	142 m/s
Velocity at Deployment	2.72 m/s
Landing Velocity	7.91 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
G69-SF	70.7 N	1.57 s	97.9 N	111 Ns	10.65:1	63 g	38/127 mm

H55W-11

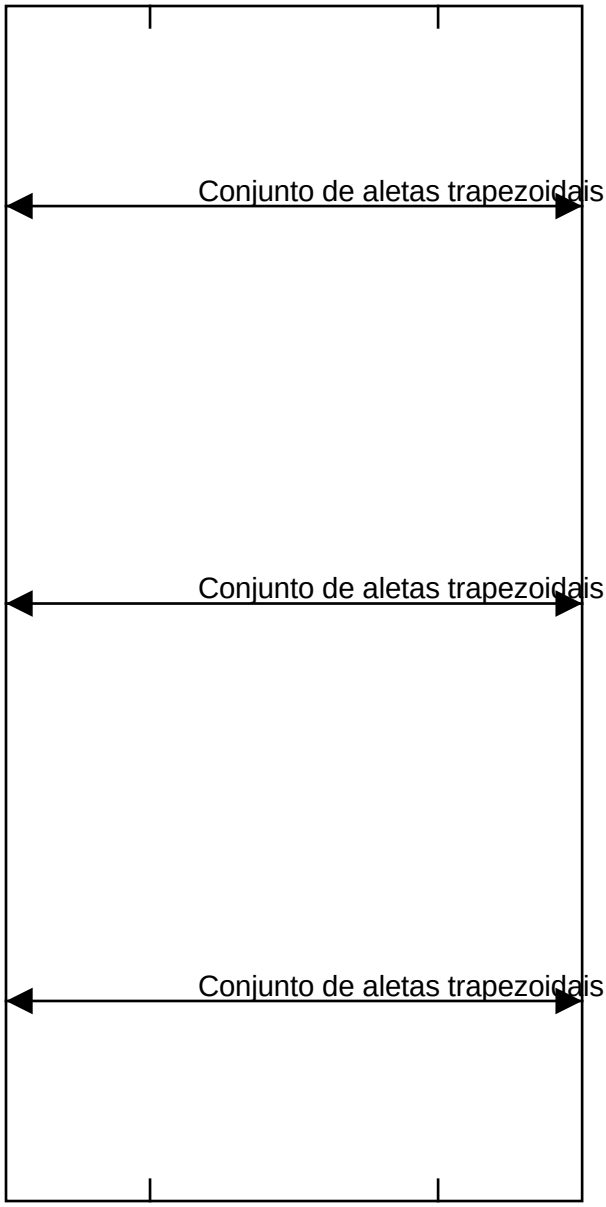
Altitude	1340 m
Flight Time	199 s
Time to Apogee	14.6 s
Optimum Delay	11 s
Velocity off Pad	15 m/s
Max Velocity	232 m/s
Velocity at Deployment	4.86 m/s
Landing Velocity	7.09 m/s

Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
H55W	56.1 N	3.57 s	69 N	200 Ns	9.91:1	82.9 g	29/172 mm

Parts Detail

Sustentador

	Ogiva	PLA (1.25 g/cm³)	Ogive	Len: 15 cm	Mass: 45.8 g
	Parachute piston tube	PVC (1.39 g/cm³)	Dia_{in} 4.6 cm Dia_{out} 5 cm	Len: 15 cm	Mass: 62.9 g
	Acoplador de tubo	PLA (1.25 g/cm³)	Dia_{in} 3.8 cm Dia_{out} 4.6 cm	Len: 6 cm	Mass: 39.6 g
	Anteparo	Polycarbonate (Lexan) (1.2 g/cm³)	Dia_{out} 5 cm	Len: 0.2 cm	Mass: 4.71 g
	Pára-quedas	Ripstop nylon (67 g/m²)	Dia_{out} 50 cm	Len: 5.1 cm	Mass: 16.4 g
	Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 30 cm	
	Cabo amortecedor	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)		Len: 40 cm	Mass: 0.72 g
	Payload Tube	PVC (1.39 g/cm³)	Dia_{in} 4.88 cm Dia_{out} 5 cm	Len: 15 cm	Mass: 19.4 g
	Acoplador de tubo	PLA (1.25 g/cm³)	Dia_{in} 4.48 cm Dia_{out} 4.88 cm	Len: 6 cm	Mass: 22.1 g
	Componente de massa		Dia_{out} 3.2 cm		Mass: 147 g
	Guia de lançamento	Cardboard (0.68 g/cm³)	Dia_{in} 0.8 cm Dia_{out} 1 cm	Len: 3 cm	Mass: 0.577 g
	Motor Tube	PVC (1.39 g/cm³)	Dia_{in} 4.88 cm Dia_{out} 5 cm	Len: 20 cm	Mass: 25.9 g
	Bloco de motor	PLA (1.25 g/cm³)	Dia_{in} 0 cm Dia_{out} 5 cm	Len: 0.5 cm	Mass: 12.3 g
	Anel centralizador	PLA (1.25 g/cm³)	Dia_{in} 2.9 cm Dia_{out} 5 cm	Len: 0.2 cm	Mass: 3.26 g
	Conjunto de aletas trapezoidais (3)	PLA (1.25 g/cm³)	Thick: 0.3 cm		Mass: 36.8 g


Conjunto de aletas trapezoidais
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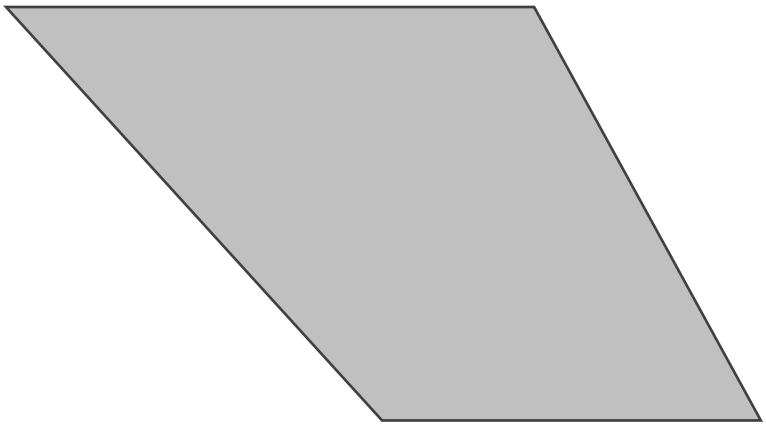

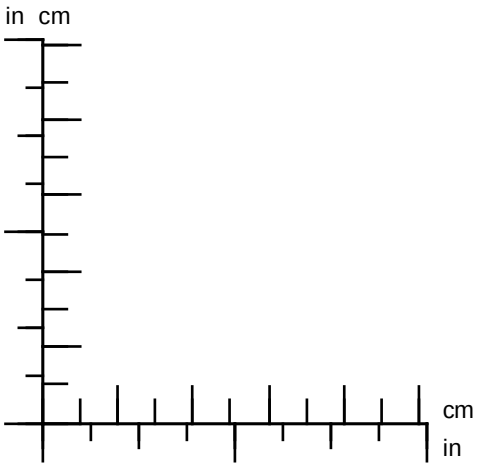
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