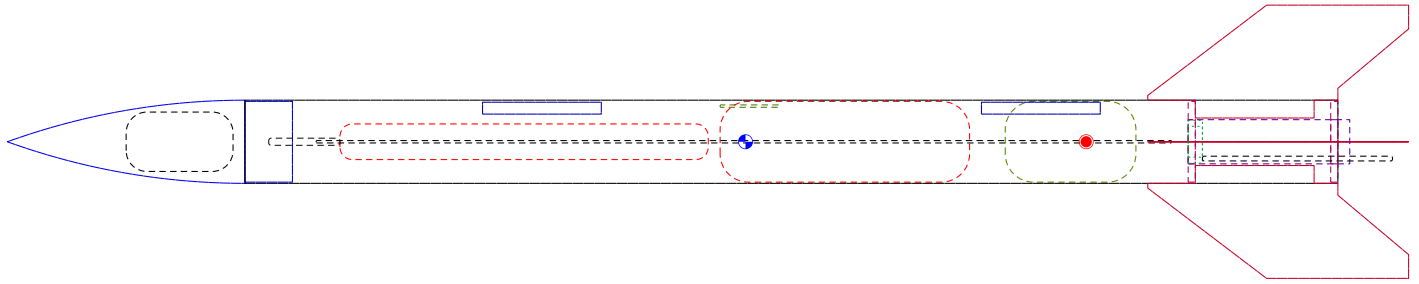


# Rocket Design



lili v1.2

Stages: 1

Mass (Empty): 62.1 g

Stability: 4.1 cal

CG: 31.1 cm

CP: 45.4 cm

## C6-5














		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Altitude	257 m	C6	6.37 N	1.53 s	15.2 N	9.8 Ns	8.01:1	8.4 g	18/70 mm
Flight Time	72.5 s								
Time to Apogee	6.89 s								
Velocity off Pad	14.7 m/s								
Max Velocity	89.8 m/s								
Velocity at Deployment	8.59 m/s								
Landing Velocity	3.95 m/s								

## D9-7

		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Propellant Wt	Size
Altitude	421 m	D9	9.45 N	1.89 s	26.4 N	18 Ns	10.69:1	17 g	18/70 mm
Flight Time	112 s								
Time to Apogee	8.24 s								
Velocity off Pad	15.3 m/s								
Max Velocity	136 m/s								
Velocity at Deployment	11.8 m/s								
Landing Velocity	4.18 m/s								

## Parts Detail

### Sustainer

	Spitze / Nose	Balsa Kantholz HART (0.2 g/cm <sup>3</sup> )	Ogive	Len: 10 cm	Mass: 15 g
	Nutzlast		Dia <sub>out</sub> 2.5 cm		Mass: 0 g
	Schrauböse		Dia <sub>out</sub> 0.3 cm		Mass: 1.6 g
	Gummiseil	default- override (0 g/m)		Len: 50 cm	Mass: 1 g
	Karabiner/Wirbel		Dia <sub>out</sub> 0.1 cm		Mass: 1 g
	Fallschirm / Parachute	default- override (0 g/m <sup>2</sup> )	Dia <sub>out</sub> 35 cm	Len: 10.5 cm	Mass: 4.7 g
	Shroud Lines	default- override (0 g/m)	Lines: 8	Len: 50 cm	
	Schockseil / Shock cord	default- override (0 g/m)		Len: 75 cm	Mass: 0.5 g
	Schutztuch		Dia <sub>out</sub> 3.4 cm		Mass: 3.7 g
	Body	Paper (office) (0.82 g/cm <sup>3</sup> )	Dia <sub>in</sub> 3.4 cm Dia <sub>out</sub> 3.5 cm	Len: 46 cm	Mass: 21.5 g
	Leitrohrchen	Paper (office) (0.82 g/cm <sup>3</sup> )	Dia <sub>in</sub> 0.4 cm Dia <sub>out</sub> 0.5 cm	Len: 5 cm	Mass: 0.1 g
	Flossen / Fins (4)	Balsa Sperrholz 3mm (0.23 g/cm <sup>3</sup> )	Thick: 0.3 cm		Mass: 10 g
	Inner Tube	Paper (office) (0.82 g/cm <sup>3</sup> )	Dia <sub>in</sub> 1.8 cm Dia <sub>out</sub> 1.86 cm	Len: 6.8 cm	Mass: 1 g
	Centering ring	Balsa Sperrholz 3mm (0.23 g/cm <sup>3</sup> )	Dia <sub>in</sub> 1.86 cm Dia <sub>out</sub> 3.4 cm	Len: 0.3 cm	Mass: 0.3 g
	Centering ring	Balsa Sperrholz 3mm (0.23 g/cm <sup>3</sup> )	Dia <sub>in</sub> 1.86 cm Dia <sub>out</sub> 3.4 cm	Len: 0.3 cm	Mass: 0.3 g
	Engine block	Paper (office) (0.82 g/cm <sup>3</sup> )	Dia <sub>in</sub> 1.3 cm Dia <sub>out</sub> 1.8 cm	Len: 0.6 cm	Mass: 0.6 g
	Motorhaltebuegel		Dia <sub>out</sub> 0.2 cm		Mass: 0.7 g
	Leitrohrchen	Paper (office) (0.82 g/cm <sup>3</sup> )	Dia <sub>in</sub> 0.4 cm Dia <sub>out</sub> 0.5 cm	Len: 5 cm	Mass: 0.1 g

