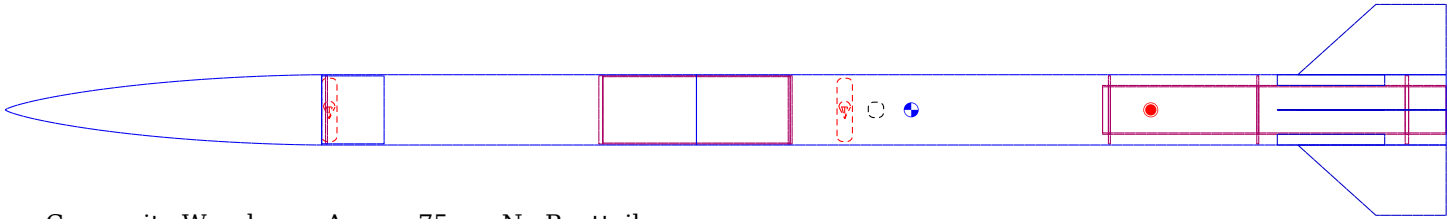


# Rocket Design



Composite Warehouse Arcas - 75mm No Boattail

Stages: 1

Mass (Empty): 8493 g

Stability: 3.41 cal / 16.6 %

CG: 147 cm

CP: 186 cm

## 5015L1115-P-0

	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	5015L1	1099 N	4.47 s	1713 N	4909 Ns	8.69:1	2394 g	75/621
Flight Time	115-P							mm
Time to Apogee								
Optimum Delay								
Velocity off Pad								
Max Velocity								
Velocity at Deployment								
Landing Velocity								

## 4025L1355-P-0

	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	4025L1	1361 N	2.95 s	1750 N	4025 Ns	10.31:1	3076 g	75/621
Flight Time	355-P							mm
Time to Apogee								
Optimum Delay								
Velocity off Pad								
Max Velocity								
Velocity at Deployment								
Landing Velocity								

## L875DM-0

		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	7262 ft	L875D M	882 N	4.28 s	1039 N	3780 Ns	6.88:1	2472 g	75/638 mm
Flight Time	101 s								
Time to Apogee	21.1 s								
Optimum Delay	16.5 s								
Velocity off Pad	24.3 mph								
Max Velocity	549 mph								
Velocity at Deployment	80.9 mph								
Landing Velocity	16.8 mph								

### M1350W-0

		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	9980 ft	M1350 W	1348 N	3.84 s	1750 N	5179 Ns	10.34:1	2690 g	75/622 mm
Flight Time	123 s								
Time to Apogee	23 s								
Optimum Delay	19 s								
Velocity off Pad	34.9 mph								
Max Velocity	739 mph								
Velocity at Deployment	80.9 mph								
Landing Velocity	16.8 mph								

### 3683L851-P-0

		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	7358 ft	3683L8 51-P	852 N	4.32 s	980 N	3679 Ns	7.07:1	2195 g	75/486 mm
Flight Time	104 s								
Time to Apogee	21.1 s								
Optimum Delay	16.8 s								
Velocity off Pad	24.7 mph								
Max Velocity	559 mph								
Velocity at Deployment	78.9 mph								
Landing Velocity	16.4 mph								

### 1654K515-16A-6

		Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	2960 ft	1654K5 15-16A	518 N	3.19 s	710 N	1654 Ns	5.21:1	1013 g	54/500 mm
Flight Time	63.1 s								
Time to Apogee	14.4 s								
Optimum Delay	11.1 s								
Velocity off Pad	22 mph								
Max Velocity	294 mph								
Velocity at Deployment	75 mph								
Landing Velocity	15.6 mph								

**2010K675-18A-8**

	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	2010K6	682 N	2.94 s	930 N	2010 Ns	6.67:1	1200 g	54/572
Flight Time	75-18A							mm
Time to Apogee								
Optimum Delay								
Velocity off Pad								
Max Velocity								
Velocity at Deployment								
Landing Velocity								

**2285K260-P-0**

	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	2285K2	268 N	8.51 s	430 N	2282 Ns	2.59:1	1241 g	54/572
Flight Time	60-P							mm
Time to Apogee								
Optimum Delay								
Velocity off Pad								
Max Velocity								
Velocity at Deployment								
Landing Velocity								

**1364K454-19A-10**

	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Altitude	1364K4	458 N	2.97 s	586 N	1364 Ns	4.72:1	821 g	54/404
Flight Time	54-19A							mm
Time to Apogee								
Optimum Delay								
Velocity off Pad								
Max Velocity								
Velocity at Deployment								
Landing Velocity								

**J650-SF-7**

