

KINETIC ENERGY COMPUTATIONS

	Section 1	Section 2	Section 3
	Nose/Main	Ebay	Science/Fin Can
Wgt	6.44	2.26	13.37
V	78.82	78.82	78.82
v ²	40009.10	14040.46	83062.36
1/2	20004.55	7020.23	41531.18
KE	621.26	218.02	1289.79

KE Drogue Calculations

	Section 1	Section 2	Section 3
	Nose/Main	Ebay	Science/Fin Can
Wgt	6.44	2.26	13.37
V	17.39	17.39	17.39
v ²	1947.53	683.45	4043.25
1/2	973.77	341.73	2021.62
KE	30.24	10.61	62.78

KE Main Calculations

INTERNAL & EXTERNAL INTERFACES

Connecting the Components

Three different connection methods are used:

1. Those that need intermittent access use #6, #8, or #10 T-nuts and screws.
2. Temporary connections between the ebay and the two parachute compartments use nylon shear pins. The shear pins prevent the rocket from premature separation due to a combination of drag, inertia, and momentum. The shear pins are, however, designed to fail when the black powder ejection charge is ignited.
3. Permanent connections use West System epoxy.

Bulkheads and Centering Rings

The bulkheads provide recovery harness mounts, confine the different components, and protect the components and electronics from black powder charges ignited during recovery system deployment. Eye-bolts are used on the bulkheads to provide a connection point for the recovery harnesses. The material for all bulkheads is 3/16 inch G10 fiberglass.