

### **Performance Characteristics.**

- a. Climb Rate. The climb rate is ~500 ft per minute, depending on weight and density altitude.
- b. Descent Rate. The descent rate is between 200 feet and 500 feet per minute, depending on engine temperature.
- c. Turn Rate. The turn rate of the Aerostar UA is 30 degrees when initiated from within the mission control station by the internal pilot or the autonomous flight management system. The EP can maneuver the Aerostar up to 60 degrees of bank angle. As a result of the Aerostar's slower speed, the number of degrees will always exceed that performed by manned aircraft making 30 degrees of bank (3 degrees per second).
- d. Maximum / Minimum Cruise Speed (KIAS). The maximum cruise speed is 62 kts, while the minimum cruise speed is 58 kts, depending on vehicle weight. The max dash speed is 80 kts with VMax of 110 kts.
- e. Approach Speed. The approach speed of the Aerostar UA is 60 knots on final approach with a flares to touch down at 52 kts.
- f. Maximum / Minimum Operating Altitudes. Aerostar is capable of operating from an altitude of 12,000 feet MSL to the surface.
- g. Gross Take Off Weight (GTOW). Aerostar has a GTOW of 440 pounds.
- h. Launch / Recovery Procedures. AeroStar is operated from improved surfaces and is launched using a conventional rolling takeoff. Recovery is accomplished by a runway landing. During launch and recovery, transfer from the external pilot and internal pilot and vice versa is required. At a safe transfer altitude, typically 800 – 1,000 feet AGL, and within visual site of the external pilot, the internal pilot transfers control of the air vehicle to and from the external pilot. While under external pilot control, the external pilot maintains visual observation of the UA and fly's the vehicle by remote control, similar to the operation of a model aircraft.