

FACT SHEET for ASK-21

GLIDE RATIO 34/1

1. Technical Data

- a. Span 55.74 ft.
- b. Length 27.4 ft.
- c. Height 5.02 ft.
- d. Max all up weight 1320 lbs.
- e. Tire Pressures:
 1. Main Wheel 2.7 Bar = 38 psi.
 2. Nose Wheel 2.0 Bar = 28 psi.
 3. Tail Wheel 2.5 Bar = 35 psi.
- f. Aero Tow: Weak link = 1320 lbs.

2. Airspeed Limitations and Load Factor Limits.

- a. Max permissible speed (calm air); $V_{ne} = 151.2$ kts.
- b. Max permissible speed (rough air); $V_b = 108.0$ kts.
- c. Max permissible maneuvering speed; $V_m = 97.2$ kts.
- d. Max speed with airbrakes extended; $V_{ie} = 151.2$ kts.
- e. Stall speed with airbrakes extended; $V_{sl} = 37$ kts. (solo), 42 kts. (dual).
- f. Stall speed with airbrakes retracted; $V_{so} = 35$ kts. (solo), 40 kts. (dual).
- g. At V_m speed G limits, +6.5 -4.0.
- h. At V_{ne} speed G limits, +5.3 -3.0.
- i. Best L/D speed = 47 kts.
- j. Minimum sink speed = 41 kts. (1036 lbs).

3. Airspeed Indicator Markings.

- a. Red line (max permissible airspeed) = 151.2 kts.
- b. Yellow arc (caution range) = 97.2 - 151 kts.
- c. Green arc (normal range) = 43.0 - 97 kts.
- d. Yellow triangle (approach speed) = 49 kts.

4. Crew: 2 persons.

- a. Front Seat (min wt. = 154 - max wt. 242 lbs).
- b. Rear Seat (min wt. = 0 - max wt. 242 lbs).
- c. **Caution:** Solo flights from the front seat only; Rear canopy locked and rear seatbelt secured.

5. Weights.

- a. Empty weight = approx. 8141bs. Arm = +30.55, Mom = + 24868
- b. Max all up weight; 1320 lbs.

6. Center of Gravity Range.

Datum Point is the wing leading edge.

- a. The approved in flight C.G. range is from 9.21 to 18.46 inches behind the datum line.
- b. Max payload front seat = 2421bs. Arm = -47.24
- c. Min payload front seat = 154 lbs. Arm seat full forward = -49.21, Arm seat full aft = -46.65
- d. Max payload back seat = 2421bs. Arm = -3.15
- e. Baggage Arm = +9.84
- f. **CAUTION:** Short weight in the front seat must be compensated by ballast (lead discs, etc., each lead disc weight compensates for 2.76 lbs.).

7. Canopy Jettisoning.

- a. Front Canopy
 1. Move lever with red knob above the instrument panel full left.
 2. Push the canopy upwards.
- b. Rear Canopy.
 1. Pull back both canopy side locks.
 2. Push canopy upwards.

8. Flying through Precipitation.

- a. Wet or slightly iced wings or wings with insect accumulation may result in decreased flight performance.
- b. This should be taken into consideration on landing final approach.
- c. Add a safety margin of 5 knots for approach speed.

9. Wing Dropping.

- a. The glider is extremely harmless. Nevertheless, one always has to face the possibility of wing dropping because of turbulence.
- b. In that case, push the stick forward immediately and apply opposite rudder until normal flight attitude is regained.

10. Ground Looping.

- a. For normal conditions ie, smooth runway, short grass, one may takeoff with the wing on the ground with out having to fear a change in direction.
- b. High grass and rough ground; however, may cause ground looping. In that case release the tow rope immediately.

11. Aero Tow.

- a. Recommended rope length = 100 - 200 ft.
- b. Max tow speed = 97 kts.
- c. Most favorable tow speed during climb = 50 - 75 kts.
- d. Liftoff takes place at about 40 kts.

12. Approach and Landing.

- a. The most favorable approach speed is 49 kts.
- b. With turbulence it may be advisable to increase the approach speed slightly.
- c. The airbrakes increase the stalling speed by about 1.6 kts.
- d. The max cross wind component is 8 kts.

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