

1. BASIC PERFORMANCE QUESTIONS:

A. How do you steer?

Hang gliders are controlled by shifting the pilot's weight with respect to the glider. Pilots are suspended from a hang strap connected to the glider's frame (hence the name "hang" glider). By moving forward and backward and side to side at the end of this hang strap, the pilot alters the center of gravity of the glider. This then causes the glider to pitch or roll in the direction of the pilot's motion and thus allows both speed control and turning.

B. How high/far can a hang glider go?

This depends a lot on the conditions in which they are flown, but flights in excess of 300 miles in length and altitudes of well over 17,999 ft. MSL have been recorded. More typically, pilots in the summer in the western US will frequently achieve altitudes of 5,000 to 10,000 ft AGL and fly for over 100 miles.

C. How long do flights last?

Again this depends on conditions, but a high altitude flight is frequently several hours in duration. On good days, pilots don't have to land until the sun goes down.

D. Where can gliders launch and land?

Pretty much any slope that is relatively free from obstructions, is steeper than about 6 to 1 and faces into the wind can be used to foot launch a hang glider. The pilot just runs down the slope and takes off when the air speed reaches 15 to 20 mph. Alternatively, towing by trucks, stationary winches and ultralight aircraft allows gliders to get into the air when no hills are available.

Where a hang glider can be landed depends somewhat on the skill of the pilot. An experienced pilot should be able to put a glider safely into any flat spot clear of obstructions bigger than about 50 by 200 ft. This area requirement can vary somewhat, though, depending on wind conditions and the surrounding terrain.

E. How safe are hang gliders?

As safe as the person flying them. Like any form of sport aviation, hang gliding can be dangerous if pursued carelessly. Gliders in the US are now certified for airworthiness by the Hang Glider Manufacturers Assn. (HGMA). Also, hang gliding instruction has been standardized and students learn from certified instructors using a thorough gradual training program. Despite these advances, people still make judgement errors and aviation is not very forgiving of such. The majority of pilots fly their entire careers without sustaining a serious injury.

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2. FLYING CONDITIONS:

A. Is lots of wind necessary to launch/fly/land?

Hang gliders can be launched, flown and landed in winds from zero to about 30 mph safely. Generally, ideal winds for launching and landing are from 5 to 20 mph depending on the flying site. Wind speed is less important in flight since the pilot controls the air speed of the glider whatever the wind speed may be.

B. How do gliders gain altitude?

While there are many sources of upwardly moving air or "lift", the most commonly used by hang gliders are ridge lift and thermal lift. Ridge lift occurs when horizontal wind hits an obstruction (like a ridge, for instance) and is deflected upward. Thermal lift occurs when terrain is heated by the sun and transfers this heat to the surrounding air - which then rises. Typically ridge lift exists in a "lift band" on the windward side of a ridge and pilots get up by flying back and forth through this band. Thermal lift on the other hand usually starts at some local "trigger point" on the ground and then rises as a column or bubble of air. To get up in a thermal, pilots thus typically circle in this region of rising air.

C. What sort of temperatures are encountered in flight?

Hang gliders are flown in sub-zero conditions in the winter and in the hottest deserts in the summer. Since the air temperature typically falls by about 4 degrees (F) for every 1000 ft gain in elevation, however, high altitude hang glider flights are frequently cold. Pilots expecting to fly over about 12 - 14,000 ft in the summer will generally wear warm clothing to protect against exposure.

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3. PILOT REQUIREMENTS:

A. Is hang gliding physically demanding?

Almost anyone can fly a hang glider. If someone can jog while balancing a 50 - 70 lb. weight on their shoulders they can learn to fly. While flying does not require great strength (since the straps - not the pilot's arms - hold the pilot up) long duration flights in turbulent conditions require a moderate degree of upper body endurance. This typically develops as the pilot progresses through training to these longer flights.

B. Do pilots need to be of a certain age, gender, weight or size range?

Hang glider pilots range in age from teens to octogenarians. The limits are more mental than physical. If someone is sufficiently mature to make decisions significantly affecting their safety and has sufficiently good reflexes to make such decisions promptly, then they probably are of a reasonable age for flying.

Since flying depends more on balance and endurance than on brute strength, woman and men make equally good pilots. While the fraction varies regionally, about 10 - 15 % of the hang glider pilots in the US are women.

While pilots of virtually any size can fly, the limits here are mostly dictated by available equipment. Heavier and lighter pilots require commensurately bigger and smaller gliders.

Since most hang glider pilots weigh between 90 and 250 lbs, however, it may be difficult to find equipment appropriate for pilots beyond this range. Specially designed tandem gliders are available, however, and may be used for extra heavy pilots.

While height per se does not determine who can fly, again, equipment tends to be most available for those between about 5 and 6.5 feet tall. Harness and glider modifications may be necessary for individuals outside this range.

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C. Do pilots need to be licensed to fly hang gliders?

Not really, but a program analogous to FAA licensing exists and is administered by the USHGA (U.S. Hang Gliding Association). This program consists of a specific set of flying skills corresponding to a series of pilot proficiency ratings (Beginner through Master) each of which carries a set of recommended operating limitations. Beginner rated pilots, for instance, should only fly from hills under 100 ft in height in mild winds and under the guidance of an instructor.

While these ratings don't carry the force of law in quite the same way as FAA pilot's licenses do, the majority of flying sites in the US require that pilots hold some specific USHGA rating to be allowed to fly.

D. How does a student go about learning to fly?

The USHGA certifies hang gliding instructors and schools. All students should learn from a certified instructor. Lists of certified schools can be obtained from the USHGA at (719) 632-

8300, or on this web page.

The time required for training varies considerably with the student's innate skills and with the type of training conditions. Typically, though, a student will spend 5 - 10 lessons to obtain each of the first two USHGA pilot ratings (Beginner and Novice) - a process which generally takes from 3 to 6 months.

At the end of this primary training process, the student is usually flying from moderate altitudes (several hundred to a few thousand ft) in relative mild conditions.

Progression to more difficult flying conditions continues from then on under the supervision of more experienced pilots or Observers/Advanced Instructors.