

Safety Guidelines for Paramotoring and powered parachutes

Introduction

Paramotoring and Powered Parachutes though they have differences in performances, have similar requirements when it comes to basic guidelines. Paramotoring can be done either on foot launch or on trikes and quads but Powered Parachutes are used only on trikes and Quads because they need bigger engines. The following rules will apply to both PPG (powered paraglider) and powered parachutes.

As compared to paragliding, powered flying has less following in Maharashtra. However there are schools who offer training and joyrides in both paramotoring as well as powered parachutes. One can see paramotoring being conducted in Pune, Ahmadnagar, Palghar and along the Maharashtra coastline.

Legalities – State requirement

All training schools and commercial tandem pilots are expected to operate after getting their organisation or companies registered as per government policies.

Guidelines for flying sites

Any motorised flying will need a large open space without obstructions of buildings, electric wires, electric poles or trees in its flying path. The takeoff and landing zones should have buffer areas for emergencies. The site should be well connected to roads and medical facilities should be available within reasonable motorable distance.

There is airspace where flight is prohibited due to airport proximity, populated areas, military use, presence of dignitaries, sensitive areas and other reasons. If there are places of worship or community centers around the flying zone care should be taken by avoiding flying close to those locations especially when there is gathering of people.

Beaches are the most popular locations for PPG & PPC due to laminar sea breeze but these places are also crowded with tourist. So unless the beach is big enough to accommodate flying activity without disturbing the tourist, it should be avoided. Location for flying should be chosen after studying and observing the wind pattern in the region. Motorised flying has to be done in smooth laminar wind flow so early morning and evening time is generally suitable for training.

Once the site is found suitable the location co-ordinates should be noted and referred to while corresponding for permissions.

Flying site management

People operating at the site are responsible for following all rules and regulations as directed by local administration and Airport Authority of India.

Guidelines for Permissions Process

No objection Certificate

First you need to obtain an NOC for use of particular site or location. The location or site may be a private property, public property, forest land, seashore etc. District administration is advised by home ministry to look into the matter and the correspondence has to be addressed to "Home" department in district collector's office. The DC office will interact with District police and get their clearance.

AAI clearance

The final and important clearance is from Airport Authority of India. Airspace is managed by AAI with help of ATC. On basis of clearance from district administrations NOTAM will have to be issued by AAI so that other aircraft pilots are aware of your activities. AAI will be giving you the radius and height ceiling in which you can operate.

Daily permission

For every day flying you need to obtain permission from local ATC over telephone. Local police can also be intimated by SMS/Whatsapp about the daily flying activities to keep them in loop.

Licensing –minimum self-regulation method

Both PPG and PPC are not regulated in India so officially no license is required to fly anywhere in India, however all pilots are expected to maintain a logbook to show their experience level. The training school should take responsibility of skill level of their students and issue them certification for their level of experience. Students are expected to fly in their limitations as cleared by the school certification.

Ideal first contact Response

Along with basic information make sure the prospective student understands that the sport has inherent risks associated with and he is covered by mediclaim and insurance. It should be explained that though it is easy and safe to learn, the sport demands dedication, time and money.

Student Enrollment process

- Basic assessment of students before joining for course.
- Enrollment form with personal details, educational background etc.
- Self-declared fitness form. – Disabilities, mental and physical health issues.
- Indemnity bond explaining insurance, mediclaim, risk factors and liability.
- All students' record is maintained by the club and available for inspection.

Guidelines for PPG & PPC training school operations:

Training courses should be based on BHPA, USPPA, APPI PPG or any other recommended body.

Instructors of training school:

Minimum number of instructors involved in training – Senior Instructor, Assistant Instructor.

There should a good student to instructor ratio maintained by the school as per the batch size.

Minimum Instructors Skill level: Over 5 year's active flying, with mastery over the skill level he is teaching. Good theoretical knowledge of the sport and good communication skills to offer training. Thorough knowledge of the equipment used, syllabus and the rating system is a must along with first aid certificate.

Suggested Training Syllabus guideline

Schools should design and follow their syllabus based on international standards for each level of course conducted by them. Theoretical knowledge should be evaluated by conducting exams. All this information should be documented and available for inspection. Refer to rating system which is equivalent to BHPA, USPPA and APPIPPG which is recommended by FAI.

Introductory course:

The course should cover the basic knowledge of engine, importance of periodic maintenance, understanding of tuning and relating it to the thrust and sound of engine etc. Along with practical skill development there should be theory and video sessions as part of basic training. There should be proper evaluation of basic skill level attained by the student specially his motor skills and reflexes. If solo flying is involved the student should be able to narrate what he would do once he gets airborne and how he will guide his aircraft to the landing zone for his final leg of flight and the process of throttle control for landing. Only after this he should be cleared for his first solo flight.

Advance level courses: Schools should design their own syllabus for each course. It should be systematic task based training to develop the skill level of the pilot. Log book and certification level for progression as per international standard should be maintained to attend the rating system.

Equipment used and airworthiness

Wings

EN /LTF/DHV/DGAC certified wings recommended for powered flying should be used for flying. Record of all equipment used should be maintained as per guidelines. Equipment room should have proper temperature so as not to damage the equipment while in storage. Annual airworthiness check should be done with documented records.

Engines

Engine requirement for Paramotoring and Powered Parachutes are different. The engines should be well tuned and checked before takeoff. They should have instruments to check the cylinder head temperature and RPM of the engine. Student should be briefed about reading and understanding the instruments.

School Setup

Classroom with teaching aids to explain fundamentals of aviation, board and a television.

Simple riser hang-point-simulator with control toggles to simulate in-flight experience.

Facilities of basic repairs and maintenance and system of inspection and airworthiness check.

Safety and risk management

Equipment vehicle used is suitable for rescue operation and equipped with recommended first aid.

Training is conducted only under supervision of Instructors.

Check lists to be made for all activities conducted by the school.

Pilot is evaluated for physical and mental health before flying.

Briefing for the day at landing zone and placement of wind socks for wind direction at landing zone.

Suitability of wind and weather before and during the activity is assessed and monitored.

Equipment used by pilots is inspected for pilot skill level and airworthiness during setup.

Skill level of student is matched with weather condition during takeoff.

Debriefing session after pack up

Emergency procedures should be documented and available in first-aid box with contact numbers of Ambulances, hospitals and doctors.

Training courses should be based on BHPA, USPPA, APPI PPG or any other recommended body.

Paragliding and Paramotoring is not regulated in India so officially no license is required to fly anywhere in India, however all pilots are expected to maintain a logbook to show their experience level. The training school should take responsibility of skill level of their students and issue them certification/ rating for their level of experience. Students are expected to fly in their limitations as cleared by the school certification/rating.

Independent hobby pilot:

An independent pilot has to be cleared for unsupervised solo flights either by his instructor or by appearing for theory and practical exam to obtain his ratings/qualifications from any recognised school.

Cross country pilot / Acro pilot – compulsion of SIV and reserve

These is a professional category pilots who generally follow international standards or rating and licensing system. This level is achieved by independent pilots who gain experience and knowledge by travelling to various locations and participate in specialized courses.

TANDEM PARAMOTORING and POWERED PARACHUTE – TRIKE

Tandem PPG or PPC should not be attempted if the wind is too strong to launch, and certainly in no more than 18kmph wind. As in the hill launch the passenger should be clipped in only when the pilot has clipped in.

In order to provide appropriate protection to the passenger/ paying student, all tandem flights must adhere to the following operational rules:

1. Prior to all tandem flights, the passenger or student must be informed that such flights are conducted under an exemption granted by the FAA, and that the paramotor does not meet aircraft certification standards set forth by the FAA.
2. When present at a flying site, any tandem pilot should personally ensure that all tandem flying requirements and the site requirements are being strictly followed. ATC clearance, noise pollution, flying with safe landing zone in gliding distance in case of engine failure.
3. All tandem accidents/incidents/malfunctions must be documented by the tandem pilot involved. Other tandem pilots who witness an accident/incident/malfunction are encouraged to report their version.
4. Each operation must comply with all sections of Part 103, except 103.1(a) of the FAR.
5. Flights are conducted for training purposes only. The exemption applies only to flights for the purpose of giving instruction in two-place powered ultralight vehicles.

6. Takeoff: There should be enough runway clearance for taxiing before takeoff as well as clear open space after lift-off to gain height and turn back in case of emergency. There has to be a wind sock on the field clearly visible to pilot during the takeoff.
7. Inflight: After gaining sufficient altitude the pilot should make sure that the passenger is sitting comfortably and relaxed. No aerobatic maneuver to be conducted below 600 feet. Make sure you are flying with landing zone in your glide ratio which you can reach in case of engine failure.
8. Landing: Make sure you can see the windsock and check the wind direction at landing zone. Make a long final leg for landing and adjust the throttle to keep some speed at touch down if necessary use little breaks to keep the nose up till the rear wheel touch the ground. On touch down kill the engine and maintain the wing overhead till the trike stops moving forward.

TANDEM PARAMOTORING FOOTLAUNCH

Tandem PPG should not be attempted if the wind is too strong to forward launch, and certainly in no more than 18kmph wind. As in the hill launch the passenger should be clipped in only when the pilot has clipped in. In order to provide appropriate protection to the passenger/ paying student, all tandem flights must adhere to the following operational rules:

1. Prior to all tandem flights, the passenger or student must be informed that such flights are conducted under an exemption granted by the FAA, and that the PPG does not meet aircraft certification standards set forth by the FAA.
2. When present at a flying site, any tandem pilot should personally ensure that all tandem flying requirements and the site requirements are being strictly followed. ATC clearance, noise pollution, flying with safe landing zone in gliding distance in case of engine failure.
3. All tandem accidents/incidents/malfunctions must be documented by the tandem pilot involved. Other tandem pilots who witness an accident/incident/malfunction are encouraged to report their version.

4. Each operation must comply with all sections of Part 103, except 103.1(a) of the FAR.
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8. Landing: Make sure you can see the windsock and check the wind direction at landing zone. Make a long final leg for landing and adjust the throttle to keep some speed at touch down if necessary use little breaks to keep the nose up till the rear wheel touch the ground. On touch down kill the engine and maintain the wing overhead, inform the passenger to brace himself while the wing is being collapsed.

References for tandem operations:

1. BHPA: British Hang Gliding and Paragliding Association
2. USPPA: United States Powered Paragliding Association
3. APPI PPG: The Association of Paragliding Pilots and Instructors - Powered Paragliding

Environment-friendly Practices - Refer to the [Guidelines for 'Leave Minimum Impact' practices.](#)

First- Aid Kit: [Indicative list of items for First-Aid Kit](#)

- End of Safety Guideline -