






POWRACHUTE SKY RASCAL

USER MANUAL





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The Sky Rascal is a single-seat, powered parachute (PPC) developed and produced by American aviation manufacturer Powrachute. A powered parachute, also called a paraplane, is a light aircraft composed of a parafoil that suspends a fuselage while in flight. It typically uses a pusher propeller that is shrouded in a guard. Powrachute introduced the Sky Rascal in 2001 and manufactured over 300. The company no longer produces the model.

The Sky Rascal traces its development to the 1999 formation of Powrachute. The company's founders, rooted in decades of powered parachute design and flight (including a world championship win), sought to create a next-generation PPC. Their first line, introduced in 2000, was a tandem two-seat design with an open cockpit and tricycle landing gear. The design included several innovative features for safety and flight performance. This included steel reinforcement of the fuselage frame, an elevated propeller, and twin rollbars in front of the cockpit that could accommodate a windshield.

The Sky Rascal was developed from the initial Powrachute line and is renowned for its ease of flight, safety, and ruggedness. It features powder coated tube construction, a powerful engine, an instrument pod, and intuitive controls.

The fuselage measures 8 feet, 9 inches in length, stands 6 feet, 8 inches tall, and is 6 feet, 4 inches wide. It has a tricycle landing gear with a steerable front wheel. The parafoil is a high-performance, 430-square-foot rectangular design with a span of 32 feet, 10 inches. The Sky Rascal is powered by a single Rotax 503 2-cylinder piston engine that produces up to 54 horsepower and drives a 3-blade, fixed-pitch, composite propeller.

Pre-flight begins by unfolding the parafoil squarely on the ground with all risers and lines unfurled with minimum slack. Launching is accomplished by accelerating forward in a straight line, which pulls the foil over the top of the fuselage and lifts the entire aircraft off the ground. Steering is accomplished by a foot-actuated steering bar, each end of which is connected to rear risers on the parafoil by lines. One of the most notable features of the Sky Rascal is that its parafoil is stall resistant, granted it is fully inflated. Because the fuselage is suspended beneath the parafoil wing, pilots can fly low over the ground for exceptional views of landscapes.

The Sky Rascal has a range of 115 miles, a typical service ceiling of 1,000 feet above ground level, and a climb rate of up to 500 feet per minute. It can take-off with a ground roll ranging from 25 to 300 feet, depending on conditions. It can land with a ground roll ranging from 10 feet to 100 feet, depending on conditions. It cruises at 30 miles per hour and has a power-off descent rate of 600 feet per minute.

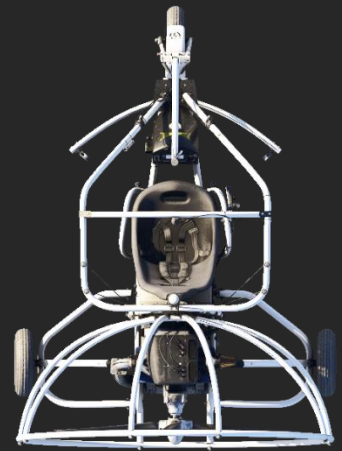
AIRCRAFT CHARACTERISTICS

ROLE: Ultralight/Light-sport aircraft
MANUFACTURER: Powrachute
MODEL: Sky Rascal
ORIGIN: USA
FIRST FLIGHT: 2001
COMMERCIALISATION: 2002
STATUS: production ended in 2004
NUMBER BUILT: XXX

COCKPIT SEATING: 1
LENGTH: 105 inches/2.6m
WING SPAN: 30ft 90in/9.42m
HEIGHT: 80 in/2.03m
WING AREA: 392.9sq ft/36.5m²
EMPTY WEIGHT: 254lb/115kg
GROSS WEIGHT: 772lb/350kg
FUEL CAPACITY: 5US gallons/18.9L



CRUISE SPEED: 22-26kts
VNE: 35
RANGE: 200mi/320km
SERVICE CEILING: 10,000ft
RATE OF CLIMB: 500 fpm



COCKPIT OVERVIEW

1. CONTROL SURFACE CONTROLLED BY FEETS
2. DUAL IGNITION SWITCHES
3. EIS
4. AVIONICS SWITCH
5. VOLTMETER SWITCH
6. STARTING KEY
7. NOSE WHEEL CONTROL STICK
8. FRONT BRAKE LEVER
9. THROTTLE
10. PRIME BUTTON
11. AVIONIC WARNING LIGHT



ENGINE

The **ROTAX 503** is a two-stroke aircraft engine designed by BRP-Rotax, primarily for ultralight aircraft, microlights, and light sport aircraft. Known for its simplicity, reliability, and lightweight design, the ROTAX 503 has become a popular choice among recreational aviators and builders of experimental aircraft.

Its lightweight design and reliable performance make it suitable for various aircraft configurations, including powered parachutes and other experimental aircraft. Pilots appreciate its ease of use and the dependable power it provides for short takeoff and landing operations.

Engine type: Two-cylinder, two-stroke, horizontally opposed (boxer) engine, air-cooled.

Displacement: 503cm³

Power output: 50hp

Ignition System: Dual electronic ignition for increased reliability and safety.

Carburetion: Equipped with dual Bing carburetors, allowing for efficient fuel delivery and performance.

Weight: Approximately 30 kg (66 lbs), contributing to its suitability for light aircraft applications.

Fuel Consumption: The engine is known for its fuel efficiency, consuming about 10-12 liters per hour, depending on the operating conditions.

Simplicity and Maintenance: Its simple design and fewer moving parts translate to easier maintenance and servicing, which is advantageous for amateur builders and pilots.





START UP		
1	Battery	ON
2	Avionics	ON
3	Magnetos	ON
4	Primer	AS REQUIERED
5	Throttle	10%
6	Starter	ON
TAKE OFF CHECKLIST		
1	Rpm	CHECK
2	Oil temp	CHECK
3	Throttle	FULL
4	Take off speed	25kts
SHUT DOWN		
1	Magnetos	OFF
2	Avionics	OFF
3	Battery	OFF