CHEETAH

OPERATORS MANUAL

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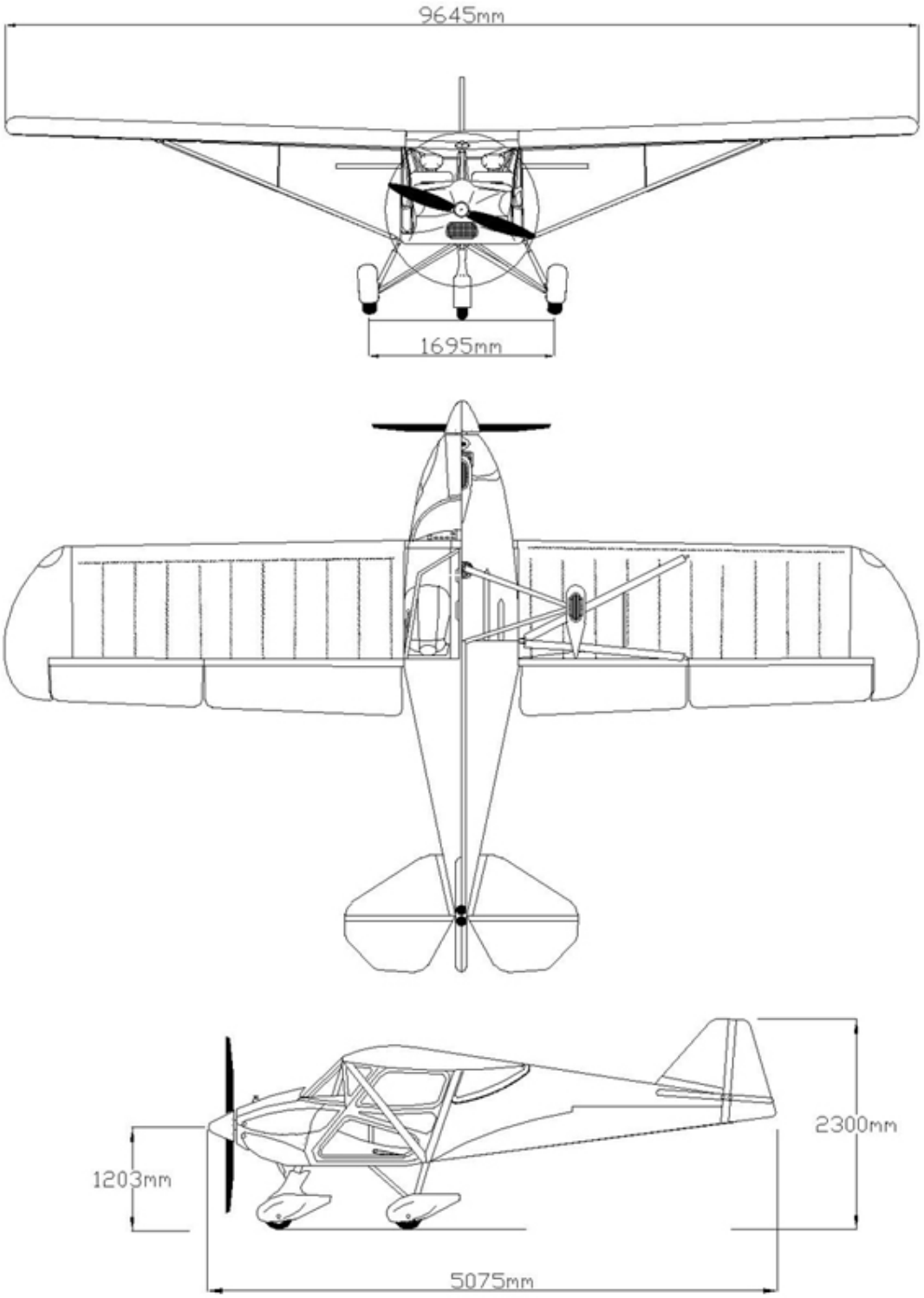
Section 3 General and Descriptive data

THANK YOU for purchasing a Cheetah microlight aircraft. It has been developed by engineers in South Africa over many years and represents the best engineered package available at the price. In order to extract maximum safety and performance from your Cheetah please familiarize yourself with the entire contents of this operating manual.

THREE VIEW:



3_1 ENGINES

The Cheetah is available with a choice of three Rotax engines:
582/99 two stroke, two cylinder, water cooled, 64HP at 6800 rpm.
912 four stroke, four cylinder, oil & water cooled, 80HP at 5800 rpm
912S four stroke, four cylinder, oil & water cooled, 100 Hp at 5800rpm.
and
Jabiru 2200A four stroke, four cylinder, oil and air cooled, 80HP at 3300 rpm engine.

3_2 PROPELLOR

The factory fitted propeller is either:
2 blade, fixed pitch P-prop
3-blade, ground adjustable Kiev Prop.

Other propellers may be fitted. We recommend checking with the factory on the suitability of alternative propellers to avoid unnecessary expense and disappointing performance.

3_3 FUEL

The Rotax approved fuel is premium unleaded car petrol with a minimum of 90 octane. The use of leaded fuel (including Avgas) is approved subject to the maintenance requirements as outlined in the engine manual. Please note that use of leaded fuel will wear the valve seats, produce deposits in the combustion chambers and increase lead sediment in the lubrication system. Hence the need for more frequent oil changes.

The Jabiru approved fuel is Avgas 100 LL or Avgas 100/130. Leaded and unleaded automotive fuels with 95 or higher octane number are also allowed. Tank capacity is 100 liters.

3_4 OIL

The Rotax approved oil for the two stroke 582 motor is super two stroke ASTM/CEC standard API -TC. The gearbox uses gear oil API-GL5/6, SAE 140EP or 85 W-140EP. The use of chain saw and outboard boat oil is not recommended. These are not designed for aircraft operation. The cost saving is trivial when compared with the price of an expensive engine overhaul.

The 912 utilizes API classification "SF" or "SG". Note that the high stresses in the reduction gears require oils with gear additives. Heavy duty **4 stroke** motorcycle oils meet all the requirements. These are normally not mineral oils but semi- or full synthetic oils. Note that if Avgas is used more frequent oil changes are required.

The Jabiru 2200A requires the use of non-compounded (for first 25 hours of operation) and compounded (thereafter) Aviation Oils. The normal running oils are detergent and ashless dispersant types. Oils recommended by the engine manufacturer are: Aero Shell W100, Mobil Aero 100 (SAE 50), BP Aero Oil D100, to name a few. See engine operators manual for more details.

3_5 MAXIMUM APPROVED WEIGHTS

Maximum takeoff weight 560 kg.

3_6 CABIN AND ENTRY DIMENSIONS

Length: 1000 mm
Height: 830 mm

3_7 BAGGAGE SPACE

Behind seats: 40 liters
Maximum weight: 30 kg

3_8 SPECIFIC LOADINGS

Wing loading	42.3 kgs/m2
Power loading:	582: 8.8 kg/HP
	912: 7.0 kg/HP
	912S: 5.6 kg/HP
	2200A: 7.0 kg/HP

3_9 GROUND TURNING CLEARANCE

Radius for wingtip....20 meters

3_10 SYMBOLS AND TERMINOLOGY

3_10_1 *AIRSPEED TERMINOLOGY*

CAS: Indicated airspeed of the aircraft corrected for position and instrument error.
GS: Speed of the aircraft relative to the ground
IAS: Airspeed as shown by the airspeed indicator.
TAS: This is the CAS corrected for altitude, temperature and compressibility.
VA: Maneuvering speed is the maximum speed at which application of full control movement will not overstress the airframe.
VF: Highest speed at which flaps may be deployed
VR: Rotation speed
VNE: Never exceed speed. Speeds beyond this will tear off the wings and spoil your whole day.
VNO: Maximum structural cruising speed. Never fly beyond this speed except in smooth air and with caution.
VS: Stalling speed with flaps
VX: Best angle of climb speed. This produces the greatest gain in altitude in the shortest horizontal distance. Required on short fields surrounded by tall trees.
VY: Best rate of climb speed. This delivers the greatest gain in altitude in the shortest possible time.

3_10_2 *PERFORMANCE TERMINOLOGY*

Demonstrated crosswind velocity: The velocity of the crosswind component for which adequate control of the aircraft during takeoff and landing was demonstrated during initial flight testing.

Section 4 Limitations

4_1 AIRSPEED LIMITATIONS

VNE	125 MPH	Do not exceed this speed in any configuration
Va	90 MPH	Maneuvering speed
VNO	90 MPH	Only progress beyond this speed in smooth air
VS	35 MPH	Stall speed at MTOW at sea level with flaps extended
VFE 17°	80 MPH	Do not extend flaps above these speeds
30°	60 MPH	
Doors off	75 MPH	Maximum allowable speed with doors removed

4_2 POWER PLANT LIMITATIONS

Please note that these figures are guidelines only. The definitive guide is the ROTAX engine handbook supplied with your engine.

Takeoff:	582: max 6800 rpm for 5 minutes 912: max 5800 rpm for 5 minutes 912S: max 5800 rpm for 5 minutes 2200A: max 3300 rpm
Max continuous power:	582: 6400 rpm 912: 5500 rpm 912S: 5500 rpm 2200A: 3300 rpm
Cylinder head temperature:	582: max 150 degrees Centigrade (normal 110-130) 912: 150 degrees Centigrade 912S: 150 degrees Centigrade 2200A: max 175 degrees Centigrade (climb)
Water temperature:	582: max 80 degrees Centigrade min 65 degrees Centigrade 912: 120 degrees Centigrade 912S: 120 degrees Centigrade 2200A: Not applicable
Exhaust gas temp:	582: max 650 degrees Centigrade (normal 500 – 620)
Oil pressure:	582: not applicable 912: max 7 bar (Normal 2 – 5 bar) 912S: max 7 bar (Normal 2 – 5 bar) 2200A: max 5.25 bar – min 2.2 bar
Oil temperature:	582 not applicable 912: 140 degrees Centigrade (Min 50 degrees C) 912S: 140 degrees Centigrade (Min 50 degrees C) 2200A: max 118 degrees Centigrade (min 15 degrees C)
Starter:	Maximum continuous cranking: Do not operate starter

	continuously for more than 20 seconds in any 2 minute period.
Maximum bank angle:	40 degrees. Beyond this the dry sump lubrication system will not lubricate the engine properly unless a balanced turn is maintained i.e. keeping the ball in the middle

4_3 CENTER OF GRAVITY

Datum is the wing leading edge, 100mm outboard from Front Wing Strut top mounting bolt.
Forward limit is aft of datum at 19% of Mean Aerodynamic Chord
Aft limit is aft of datum at 39% of Mean Aerodynamic Chord
For further details on Centre of Gravity and leveling means consult Section 8 "Mass and Balance Procedure".

4_4 MANUEVER LIMITS

This aircraft is not approved for aerobatic maneuvers. Intentional spins are prohibited.

4_5 FLIGHT LOAD FACTORS

Positive:
Flaps up: +4.0G
Flaps down: +3.8G
Negative: -2G

4_6 GLIDE RATIO

10: 1

4_7 OPERATIONAL LIMITS

This aircraft is approved for day VFR operation only.

Section 5 Emergency procedures

5_1 ENGINE FAILURE AFTER TAKEOFF

Fly the aircraft to the ground. Do not become so busy with restart attempts that control is lost. Take full flaps to ensure the lowest possible landing speed. Sacrifice aircraft structure to ensure the survival of the crew.

5_2 ENGINE FAILURE AT ALTITUDE

Trim aircraft for best glide (60 mph). Fuel starvation is the most likely cause of engine stoppage. Attempt restart if sufficient altitude allows. Follow your flight school's approved emergency landing procedure if restart is not possible.

5_3 ENGINE FIRE

On the ground: Fuel off, power off, evacuate aircraft, pray for fire extinguisher availability

In flight: Fuel selector off. Power off. Emergency descent and land. Side slips without flaps are permitted and will draft fire away from the cockpit area.

5_4 UNLATCHED DOOR IN FLIGHT

This can occur just after takeoff. If the front door latch becomes unlatched in flight the door will swing open backwards, possibly breaking off door hinges. In such case the door may get stuck against the Front wing strut adversely affecting flight characteristics, by creating excessive drag on one side of the aircraft. Should this occur the aircraft should be put immediately in a steep side slip maneuver in opposite direction to the unlatched door. This maneuver will release the oncoming air pressure on the unlatched door allowing it to drop away from the aircraft. After the door has been safely purged return to the airfield in a normal manner, observing maximum flying speed with doors removed, as described in Section 2, Airspeed Limitations. Do not become distracted by trying to close the door in flight and lose control of the aircraft.

5_5 WINTER WEATHER

If the aircraft is left outdoors overnight frost may accumulate on the wing surfaces. Do not attempt flight until the frost has been removed. The aerodynamic performance of the wing will be severely affected while covered in frost. Similarly heavy dew may accumulate at daybreak or nightfall. Wipe all surplus liquid off the wing before flight.

Section 6 Normal procedures

6_1 AIRSPEEDS FOR SAFE OPERATION (560kgs)

Maximum demonstrated crosswind component	32 MPH
Takeoff: Rotate at	45 MPH
Best angle of climb VX	65 MPH
Best rate of climb VY	60 MPH
Cruise climb	90 MPH
Maneuvering	90 MPH
Turbulent air penetration	90 MPH
Landing approach (flaps down 18 degrees)	50 MPH

6_2 PREFLIGHT INSPECTION

6_2_1 COCKPIT

a. All switches off
b. Trim tab set to zero
c. Flaps up
d. Check bolts on wing attach mount as well as aileron cables and pulleys.
e. Check nose wheel support tube bolts. Access may be easier from below the cockpit.
f. Check cables and attach pins on control stick (located in center console).

6_2_2 EXTERIOR

g. Engine: Check oil level, rotary valve oil reservoir (582), water levels, engine mounts, propeller blades, propeller bolts, gear box oil level, cowling secure, air filters secure & clean, no oil leaks. Exhaust springs intact & safetied. Check exhaust for cracks. Carburetor rubber mountings: check for splits or cracks.
h. Wing: Check strut connection points on fuselage for cracks and the bolts are secure. Check flaps & ailerons move freely. Check fabric free of tears particularly on leading edges. Ensure all securing rings are installed on cable attach eyebolts on flap and aileron horns. Inspect all eyebolt and pin hinges on ailerons and flaps underneath the gap seals.
i. Jury struts: Check bolts secure and for cracks.
j. Tail cone area: Check for bent tubes, holes or tears in fabric.
k. Tail surfaces: Fittings intact. Bolts all secure.
l. Elevator: Check for free movement and hinges secure.
m. Rudder: As for f.
n. Fuel cap properly closed.
o. Sufficient fuel for flight.
p. Wheels pumped. Mains: 1.5 bar, nose: 1.2 bar

6_3 PRE-START

a. Buckled in.
b. Helmet on & pilot's head too. (Vital)
c. Check free movement of all controls (rudder only when moving)
d. Set altimeter
e. Note fuel quantity
f. Set throttle
g. Mags on
h. Prime engine (if applicable)
i. Start
j. Check oil pressure (912, 2200A)
k. Taxi radio call
l. Check brakes

6_4 BEFORE TAKEOFF

a. Warm up the engine at 2000 RPM for 2 minutes. Continue at 2500 RPM until operating temperatures are reached.
b. Check windsock for wind direction. Hold aileron down into crosswind (if any).

6_5 TAKEOFF

a. Align aircraft with runway center line.
b. Check compass agrees with runway heading
c. Strobes on (if fitted)
d. Take full power. Check that max rpm is being delivered.
e. Rotate at 45 MPH
f. Hold runway heading. Keep the ball in the middle.

6_6 AFTER TAKEOFF

a. At 50 feet slowly retract flaps
b. Establish climb speed required
c. Check engine instruments

6_7 DESCENT

a. Beware of carb icing with low power settings and high rpm

6_8 BEFORE LANDING

a. Seat belts fastened
b. Flaps: one notch
c. Airspeed: 60 MPH

6_9 BALKED LANDING

a. Full power
b. Flaps up

6_10 AFTER LANDING

a. After clearing the runway: Flaps up
b. Strobes off (if fitted)

6_11 SHUTDOWN

a. Radios off
b. Allow engine to cool for 2 minutes before shutdown
c. Mags off
d. Fuel selector off
e. Apply parking brake, install wheel chocks or tie-downs as required

Section 7 Systems description

7_1 AIRFRAME

The Cheetah is a Gitter covered high wing, aluminium tube monoplane with fixed undercarriage and a conventional horizontal and vertical stabilizer.

7_2 SEATING

The Cheetah is a two place, side by side aircraft.

7_3 FLIGHT CONTROLS

Control surfaces use eyebolt and pin hinges and operate through a mixture of cable and push rod operated pulleys and bell cranks.

7_4 CONTROL STICK

Control is via a centrally situated single stick which can be operated by either the pilot or co pilot.

7_5 RUDDER PEDALS

Rudder pedals are provided for both pilot and copilot. They are linked via cable and pulleys to the rudder.

7_6 BRAKES

The brakes are actuated by a single hand lever situated on the control stick. They are operated by cables to the main wheels. Differential braking is provided on tail-dragger variant only.

7_7 TRIM CONTROLS

A trim tab is actuated via a lever located on the side of the center console

7_8 STEERING

A direct linkage from the rudder pedals actuates the nose/tail wheel steering.

7_9 FLAPS

A two position flap lever is situated in the top center section of the cockpit between the pilot and copilot. Two notches of flap are provided: Notch 1: Take-off. Notch 2: Landing. Lowering the flaps in flight will produce the following effects:

Attitude: Nose down
Airspeed: Reduced
Stall speed: Lowered

7_10 SEAT BELTS

Four point seat belts are provided as an integral unit for both pilot and copilot. The flat metal tip is inserted into the receptacle to lock the belt mechanism. Pressing the red button releases the buckle.

7_11 DOORS

The door latch is actuated by a forward rotation of the handle.

7_12 ENGINE CONTROLS

The throttle is operated by a knob situated in each of the flip down arm-rests. Pushing them in towards the firewall increases engine rpm. A friction mechanism controls the ease with which the throttle will slide.

In newer Cheetah-XLS models throttle is operated by a counter-lever handle situated on each flip down arm-rest. Pushing either lever forward increases engine rpm. Pulling it backwards will reduce engine rpm. In this configuration both levers work simultaneously.

The choke is actuated by a small lever located on the side of the center console. The choke is operated by pushing the lever forward.

7_13 ENGINE LUBRICATION

Rotax 582: engine oil is mixed directly with the petrol before pumping into the fuel tank. The required ratio is 50:1

Rotax 912/(S): a dry sump lubrication system is used which also lubricates the gearbox and provides cooling to the cylinder heads.

2200A: engine lubrication is provided by means of internal gear pump, directly mounted on the camshaft and incorporating a small automotive spin-on filter.

Section 8 Handling

8_1 TOWING

The aircraft can be towed by use of the nose wheel tow bar or by pulling on propeller hub. In addition extra push can be applied at the strut attach point.

8_2 TIE-DOWN

It is advisable to park nose into the wind. Tie down ropes can be attached at the upper strut attach points and the rear fuselage tie down lug.

8_3 WINDSHIELD & WINDOWS

The windshield and windows are made of polycarbonate. It is recommended that covers be installed while parked. It is very easy to scratch the surface of the polycarbonate so care must be taken when installing or removing the covers if there is grit on the windshield or windows. Do not spill petrol or solvents on the polycarbonate or use them for cleaning. A soft cloth or chamois should be used with a weak soap solution (dishwashing fluid).

Section 9 Service and Maintenance

9_1 INTRODUCTION

This section details the requirements for maintaining your Cheetah in a condition equal to that of its original manufacture.

9_2 INSPECTION PERIODS

An inspection is required by an A/P**every 100 hours or once a year whichever comes first. Should the aircraft fly in exceptionally turbulent conditions or experience a hard landing perform a thorough airframe inspection before the next flight!

**(Approved Person - approved by Rainbow Aircraft and by local Civil Aviation Authority. They will be provided with a factory supplied maintenance check list)

9_3 ALTERATIONS OR REPAIRS

Should alterations or repairs be made to the aircraft it is mandatory to have a competent Approved Person check the work before flight and to sign out the aircraft log book.

9_4 FUEL DRAINS

Two fuel drains are located under the fuselage behind the seats. They should be purged before every flight to remove water and any loose sediment in the fuel tanks.

9_5 OIL AND WATER SYSTEM

582: Lubrication is provided via the oil in the fuel and the rotary valve reservoir. Ensure both are supplied in the correct quantities.

912: The oil level must be checked at the oil reservoir cap before every flight. Oil changes must be performed every 100 hours. This includes replacement of the oil filter. Use only the approved specification oil. Remember the gearbox shares the engine oil.

582 and 912: The radiator water level must be checked at the filler cap. When topping up use a 50:50 mixture of distilled water and approved anti freeze.

2200A: The oil level must be checked via Dip stick mounted on top of the engine housing before every flight. Oil changes must be performed every 100 hours. This includes replacement of the oil filter. Use only approved specification oil.

9_6 BATTERY

A sealed cell lead acid battery is used. Topping up of water levels is not required. When insufficient charge is available replace the battery. It is located behind the instrument panel.

9_7 ENGINE MAINTENANCE

The Rotax/Jabiru manual supplied with your engine provides a comprehensive maintenance schedule. Most of the routine engine maintenance can be performed by the owner provided he/she has an understanding of the work required. Should this not be the case it is highly

recommended that your authorized Rotax/Jabiru engine dealer perform the necessary service.

9_8 MAJOR OVERHAUL

It is mandatory that maintenance on the aircraft frame and systems be carried out at regular intervals as specified in "Cheetah Maintenance Manual" document*. Should you not have a copy of this document in your aircraft's "Owners file" please request a copy from the Factory or your authorized distributor.

*This document is normally supplied on a CD.

9_9 REPLACEMENT OF COMPONENTS

Consult "Cheetah Maintenance Manual" document for a list of scheduled replacement of components.

Section 10 Mass and Balance of aircraft

Careful calculation of Mass and Balance is vital to the continued safety of your Cheetah aircraft. The examples and forms provided below will help you to determine your aircraft empty weight and empty weight centre of gravity. These calculations can then be used to calculate your useful load and loading schedule to ensure that you operate your aircraft within its Centre of Gravity envelope.

Staying within the CG range and gross weight limitations is essential to safe flight. Exceeding the aircraft's gross weight means that you are reducing the margins of safety built into the design of the aircraft and exposing yourself to possible dangers associated with overloading the aircraft.
Exceeding the centre of gravity range will alter the stability of the aircraft and may change its handling characteristics. If the CG is too far forward elevator may not have enough authority to carry out certain maneuvers. If the CG is too far aft, the aircraft may become unstable in pitch, may become irrecoverable from stall and may become more prone to spinning.

The basic process of determining your aircrafts Mass and Balance involves leveling and weigh the aircraft and doing some calculations to find the empty mass and empty CG range. With those figures in hand the useful load and loading schedule can be determined.

The aircraft must be weighed in its Final Flight configuration. This weight includes everything needed for the aircraft to take to the sky, except the pilot, passenger, useable fuel and baggage.

Leveling the aircraft is done by means of spirit level placed on the cabin floor.

Datum is the imaginary vertical plane from which all horizontal measurements are taken for balance purposes with the aircraft in level attitude.
The Datum for all measurements is Wing Leading Edge at the point where bottom of the door will intersect Wing Leading Edge when the door is fully opened.

Weighing points are the aircraft's main landing gear and nose wheel, or tail-wheel for tail-dragger configuration.

Centre of Gravity of the aircraft (**CG**) may be defined as the point where negative and positive moments are in equilibrium, i.e. if suspended at that point the aircraft would have no tendency to pitch its nose up or down and would remain balanced. The mass of the aircraft is assumed to be concentrated at its **CG**.

CG Range is the allowable variation in the CG location. CG location can be affected by variations in loading of aircraft: e.g. weight of occupants, fuel and baggage. Since CG limits define the range of allowable variation of the CG without making aircraft unstable and unsafe to fly the CG of loaded aircraft must remain within these limits.

Forward and Aft CG are the most forward and the most rearward allowable CG limits of the aircraft. These limits are defined by the design of the aircraft and should never be exceeded under any circumstances.

Mean Aerodynamic Chord (MAC) is the mean chord of the wing. For mass and balance purposes MAC is used to determine the CG range of the aircraft. Mean Aerodynamic Chord for Cheetah aircraft is 1508mm.

Maximum Gross weight of the aircraft is the maximum weight of the aircraft and its "contents" authorized for flight by its design limitations and applicable regulations.
The maximum gross weight of Cheetah aircraft operated under MPL (Microlight Pilot License) is 450kg.
The maximum gross weight of Cheetah aircraft operated under PPL (Private Pilot License), RPL (Recreational Pilot License) or LSA (Light Sport Aircraft) regulations or any other equivalent license is 560kg.

Empty weight of the aircraft includes all operating equipment which is permanently fitted in the aircraft. Engine oil and unusable fuel must be included in empty weight calculation.

Useful load is calculated by subtracting the empty weight from the maximum allowable gross weight of the aircraft. This load consists of occupants, fuel and baggage.
Arm (Moment Arm) is the horizontal distance in mm, from the datum to the centre of gravity of various items. A positive arm indicates the item is located aft of datum. A negative arm indicates the item is located forward of datum.

Moment is the product of the weight (in kg) and of the arm (in mm).

Tare is the weight of equipment used in leveling and weighing the aircraft, which is reflected on the scale reading but does not form of the actual weight of the aircraft. For example shims placed under the wheels in order to level the aircraft, support beam placed under tail-wheel for tail-dragger variant leveling, etc.

CG limits:
Forward limit – 19% of MAC (286.5mm)
Aft limit – 39% of MAC (588.12mm)

Weight and Balance procedure

1. Place the aircraft tree scales (one under each wheel). This should be done preferably on a level floor, inside a building (hangar). The main wheels should be level with one another so the aircraft is leveled laterally. If the aircraft is not level laterally, place shims under the lower wheel until it is level with the other wheel. Place a scale under the front wheel and ensure the aircraft is level longitudinally. Add shims under the front wheel if necessary, or let down pressure in the front tyre if necessary. For tail-dragger configuration place a stand between the tail wheel and the scale. Adjust the stand until the aircraft is level longitudinally. Use a spirit level on the cabin floor to ensure that the aircraft is level.

2. With the aircraft level record the scale readings and tare weights:

Position	***Scale Reading***	***- Tare***	***= Weight P***
Front wheel	kg	kg	kg
Left main	kg	kg	kg
Right main	kg	kg	kg
Tail wheel	kg	kg	kg
Aircraft Empty Weight			**kg**

Aircraft Empty Weight = Nose/tail wheel + Left main + Right Main

3. With the aircraft still level, drop a plumb line from leading edge of the wing, 100mm outboard from the Wing Strut top mounting bolt, and mark the floor at this point. Repeat this step on the other side. Similarly mark the floor at the points directly below the centre of the axles of all three wheels. Move the aircraft out of the way. Make a line between two datum points on the floor. Using Straight Edge (carpenters square) draw perpendicular lines from the Nose/tail wheel axle mark and from main wheel axle mark to the datum line. Measure the resulting perpendicular lines between the axle marks and the datum line and record the measurements below (in decimals):

Position	***Arm***
Front wheel arm	- mm
Left main arm	+ mm
Right main arm	+ mm
Tail wheel arm	+ mm

4. Compute the aircraft moments by multiplying each scale reading by its arm:

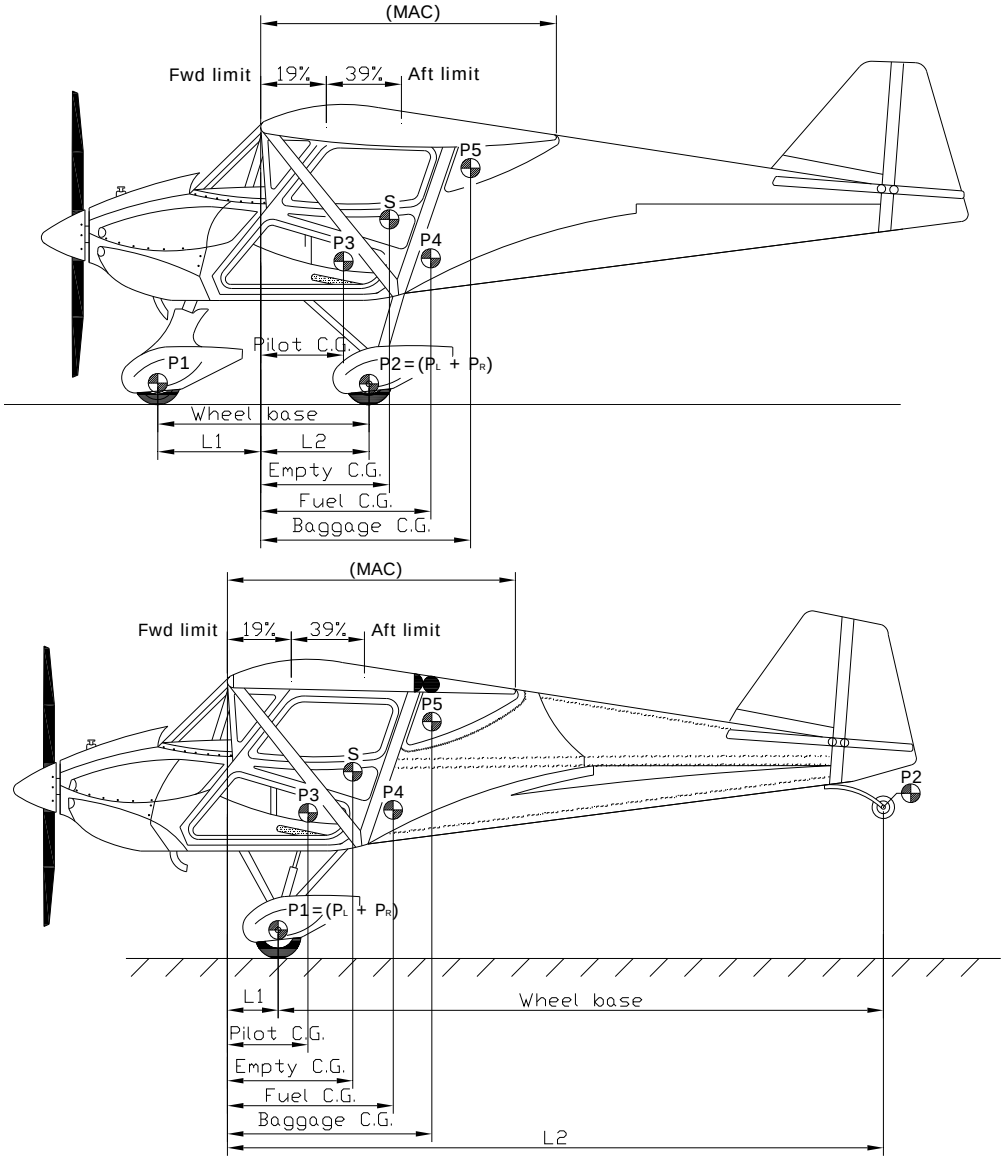
Position	***Weight P (kg)***	***x Arm L (mm)***	***= Moment M (kg*mm)***
Front wheel		-	-
Left main		+	+
Right main		+	+
Tail wheel		+	+
Total			

5. Now divide the Total Moment by the Total Weight to calculate the empty weight CG from datum:

Empty CG = ∑M/∑P **Empty CG = ———— =**

6. Check your calculations against most Forward and most Aft CG limits to ensure the aircraft is loaded correctly.

7. Use the Mass and Balance form below to record your calculations and check your loading.



Position	***Weight P (kg)***	***x Arm L (mm)***	***= Moment M (kg*mm)***
Front wheel			
Left main			
Right main			
Tail wheel			
Fuel		935	
Pilot		505	
Passenger		505	
Baggage		1075	
Total			
CG = ∑M/∑P			mm

Section 11 Safety

We have striven to produce the best engineered and manufactured Cheetah airplane that we can. The final link in the chain to ensure safe and enjoyable flight is the training and skill of the pilot.

We include the following in our operators manual as a refresher on safety subjects. It is not necessarily comprehensive but will serve as a reminder on these all important issues.

As the pilot in command you alone carry the responsibility to fly wisely and safely. This responsibility extends to your passengers and people on the ground. The media love to publicize even the most trivial of aviation incidents and have a field day on aircraft accidents. To ensure our continued use of the very special privilege to fly please display the very highest of professional standards when you climb into the left seat.

These are some abridged Do's and Don'ts:

Do's

- Ensure you are very familiar with your aircraft. Know its limitations and more particularly your own. Gravity is very unforgiving.
- Stay current in your aircraft. When your flying skills are rusty find a competent instructor to bring you back up to speed.
- Preplan your flight even for pea patch sorties. This includes weather and fuel reserves
- Preflight properly. Kicking the tyres and lighting the fires may result in just that.
- Use checklists
- Have sufficient fuel for takeoff, flight and an adequate reserve.
- Ensure overall weight and the C of G are within limits
- Use seat belts at all times. This includes pilot and passenger.
- Do not have loose items floating around the cabin or in the luggage area.
- Ensure all controls have full freedom of movement before takeoff.
- Maintain prescribed airspeeds in all phases of flight
- Practice emergency procedures at a safe altitude until all actions are instinctive.
- Keep the airplane in good mechanical condition.
- Stay alert to the possibility of big aircraft wake turbulence.
- Be wary of conditions conducive to carb icing: high humidity and temperatures ranging from -5 degrees Centigrade to 20 degrees Centigrade.
- Keep the engine and airframe log up to date
- Remember the Rotax warning and fly accordingly: "This engine, by its design, is subject to sudden stoppage. Engine stoppage can result in crash landings, forced landings or no power landings. Such crash landings can lead to serious bodily injury or death."

Don'ts

- Never leave the aircraft unattended while the engine is running
- Do not fly into thunderstorms or turbulent weather
- Beware of frost or ice on wings
- Avoid mountainous terrain particularly in strong winds

- Avoid flying conditions beyond your ability
- Don't fly when tired or sick
- Don't trust to Lady Luck.

Section 12 Index