

A white Remos aircraft is shown from a high-angle perspective, flying over a body of water. The sun is low on the horizon, creating a shimmering, golden reflection on the water's surface. The aircraft's wings, fuselage, and landing gear are clearly visible. The overall scene is serene and captures the beauty of flight at dusk.

REMOS

A I R C R A F T

including Flight Training Supplement

Pilot Operating Handbook

Edition 4 / Rev. 03 USA

REMOS G-3 /600 - Pilot Operating Handbook

Light Sport Aircraft REMOS G-3 /600 with ROTAX 912S Engine.

Important:

The REMOS G-3 /600 was manufactured in accordance with the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

Serial No.:

Engine-Type:

Year of Construction:

Serial No. Engine:

Call Sign:

Propeller-Type:

Serial No. Propeller:

Manufacturer:

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Date

Signature / Dealer Stamp

Remarks and Alterations

Applied Modifications

Please make a notation below, if any changes have been made to this manual or to the plane. This manual is an important documentation for pilots in command to ensure a safe operation of the aircraft. Therefore it is recommended to keep this Operating Handbook updated with the newest information available. You can get the latest upgrades of this manual from your dealer or directly from the manufacturer's homepage.

Pos.	Page	Description	Date	Sign

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General information about this handbook

This Flight Operation Handbook is divided into several chapters. These chapters can be identified quickly by the use of the colored markings on the top corners of each side. The structure of this handbook complies to the Light Sport Aircraft airworthiness standards.

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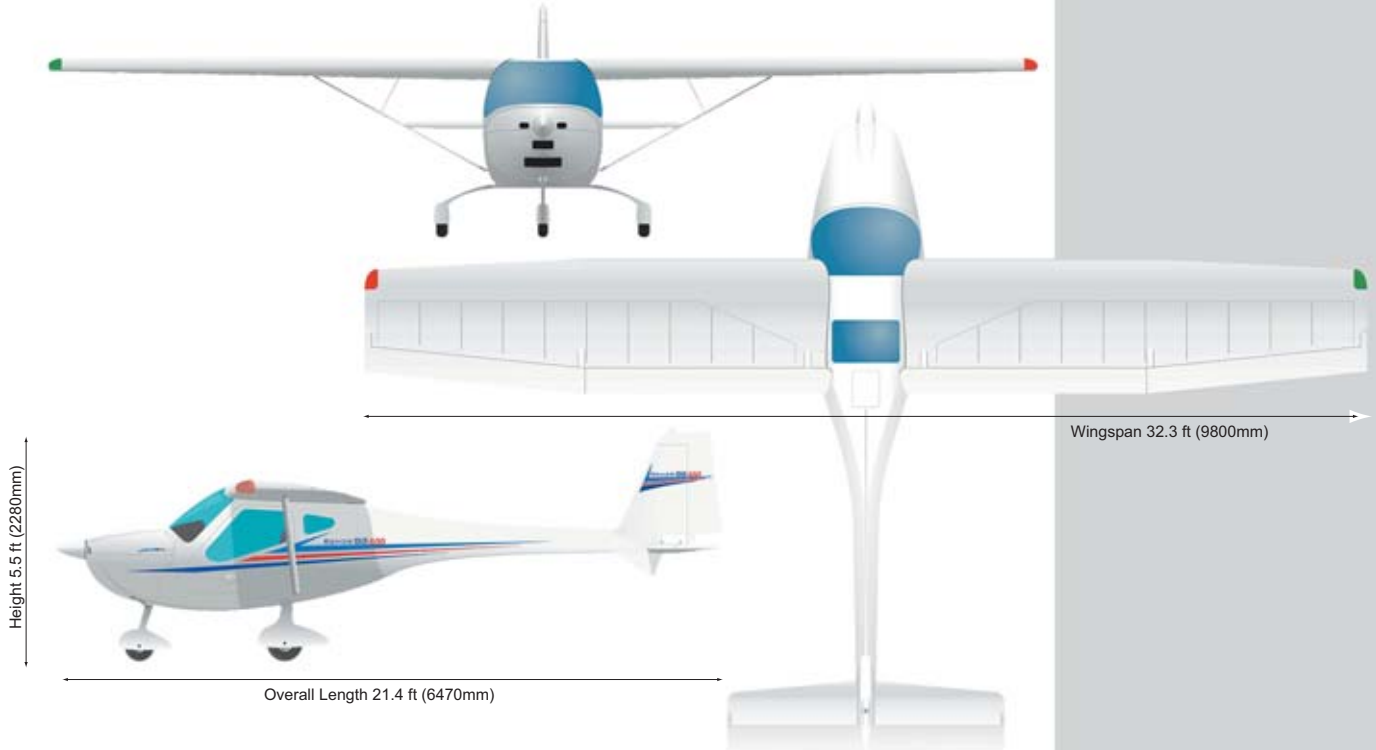
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Views

The REMOS G-3 /600 is designed as full composite carbon fiber & fiberglass aircraft. You will find detailed information on the following pages.



REMOS G-3 600

1 General Information

1.1 Introduction

This Operation Handbook is designed to help enable a safe and successful completion of each flight with the REMOS G-3 /600. It provides you with all necessary information for regular maintenance and operation of the aircraft. Therefore we recommend that the pilot keeps this Operating Handbook upgraded with the newest information available. You can get the newest version of this Handbook from your local dealer or directly from the manufacturer's homepage.

1.2 Certification

The REMOS G-3 /600 complies to the rules of the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

1.3 Quick Reference

Type: Full composite carbon fiber / fiberglass aircraft with two seats.

Design: High wing design with struts, front mounted engine and propeller, traditional stabilizer concept, differential ailerons aerodynamically compensated. Electrically operated flaps (0° to 40°), electric elevator trim, three-wheel landing gear with steerable nosewheel. Fiberglass main gear with hydraulic disc brakes.

1 General Information

The cabin is equipped with two seats side by side and will be entered and exited by doors on the left and right side of the fuselage.

Design: Main components are built in halfshells from composite fiber material, which are bonded together (carbon fiber, Kevlar and glass fiber).

Engine: Rotax 912 ULS

Propeller: 2-blade fixed pitch (wood), 2-blade ground adjustable (carbon)

1.4 Technical Specifications

Wingspan	32.3 ft
Length	21.4 ft
Height	5.5 ft
Wing area	131.0 ft²
Wing load *	10.08 lb/ft²
Wing width	4.06 ft

* at 1320 lb maximum takeoff weight

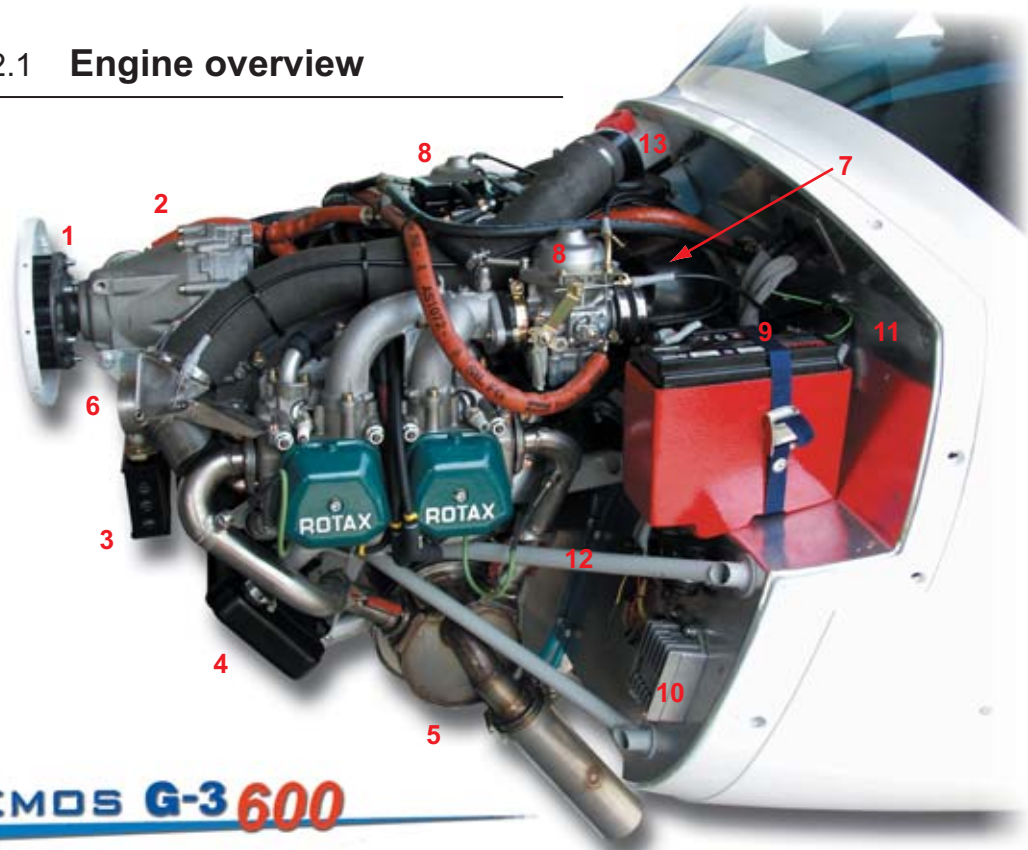
2 Airplane Systems and Descriptions

To ensure maximum durability and performance of your Rotax engine, it is essential to use the lubricants and maintain the values described in this chapter.

Components

1. REMOS prop-spacer
2. Gearbox including clutch
3. Oil cooler
4. Water cooler
5. REMOS stainless steel exhaust system
6. Carburetor heating
7. REMOS-Airbox
8. Carburetor
9. Battery
10. Voltage regulator
11. Ceramic-firewall
12. REMOS engine mount
13. Coolant expansion tank

2.1 Engine overview



REMOS G-3 600

2 Airplane and Systems Descriptions

2.2 Engine

Engine manufacturer:		ROTAX
Engine type:		912 ULS*
Max. power:	at take-off:	73.6 kW / 100 hp
	permanent:	69.9 kW / 95 hp
Max. rpm:	at take-off:	5800 rpm.
	permanent:	5500 rpm.
Max. cylinder head temperature:		275°F (135°C)
Max. fuel pressure:		5.7 psi (0.4 Bar)
Max. oil temperature:		266°F (130°C)
Min. oil temperature:		120°F (50°C)

2.3 Propeller, Gearbox

Propeller manufacturer:	F. Ili Tonini / Sensenich
Propeller type / no. of blades:	GT-169,5-164, 2-blade wood / 2A0-R5R70-EN
Gearbox manufacturer:	ROTAX
Gearbox ratio : Propeller:	2.43 : 1
Clutch:	yes

2.4 Fuel and fuel capacity

Permissible fuel qualities:	Premium Unleaded Auto Fuel, 100 LL Aviation Fuel
Useable fuel capacity:	21 gallons
Total fuel capacity:	22 gallons

* Manufacturer specification till overhaul / TBO = 1500 hrs.

Values are subject to change without notice, please refer to the latest issues of the appropriate manufacturer manuals.

2 Airplane and Systems Descriptions

2.5 Engine oil,coolant

Engine oil:	Automobile engine oils*
Engine oil capacity:	0.75 gallons (2.8 litre)
Recommended oil:	Shell Advance 10W 40 semi-synthetic
Recommended cooling fluid:	BASF Glysantin, green
Coolant capacity: (mixture antifreeze/water 1:1)	0.65 gallons (2.5 liters)

2.6 Operating weights and loading

Maximum permissible take-off weight (W):	1320 lb (600 kg)
Minimum useful load (W _U):	430 lb (195 kg)
Maximum empty weight (W _E):	890 lb (405 kg)
Minimum empty weight:**	626 lb (280 kg)
Minimum flying weight:	740 lb (336 kg)
Occupants (at minimum empty weight):	513 lb (233 kg)
Baggage:	66 lb (30 kg)
Fuel (max):	126 lb (57 kg)

* No aircraft engine oils, refer to Rotax operation instructions.

** Empty weight with basic equipment like described within the Pilot Operating Handbook, without rescue System.

Values are subject to change without notice, please refer to the latest issues of the appropriate manufacturer manuals.

2 Airplane and Systems Descriptions

2.7 Cockpit and basic equipment

Instruments and switches

Remark:

This illustration shows the basic equipment only.



- | | | |
|--|---------------------------------------|----------------------------------|
| 1. Airspeed indicator | 10. <i>Optional throttle</i> | 22. Throttle lever |
| 2. <i>Reserved for att. gyro</i> | 11. <i>Reserved for GPS</i> | 23. Charge indicator light |
| 3. Altimeter | 12. <i>Reserved for XPDR</i> | 24. Master switch |
| 4. Slip indicator | 13. <i>Reserved for radio</i> | 25. Ignition key / magneto check |
| 5. <i>Reserved for dir. gyro</i> | 14. <i>Reserved for Intercom</i> | 26. Avionics master switch |
| 6. Vertical speed indicator | 15. <i>Reserved for Manifoldtemp.</i> | 27. Circuit breakers |
| 7. Compass | 16. Fuel quantity gauge | |
| 8. Flydat (refer to page 19) | 17. <i>Reserved for add. gauges</i> | |
| 9. <i>Opt. oil cooler flap control</i> | 18. <i>Reserved for RS-232 con.</i> | |
| | 19. Trim/Flap control switch | |
| | 20. Device switches | |
| | 21. Trim and Flap indicators | |

2 Airplane Systems and Description

2.8 Center panel controls and circuit breakers

The most important switches for operation of the aircraft are placed on the center panel. The illustration below shows the basic equipped aircraft.

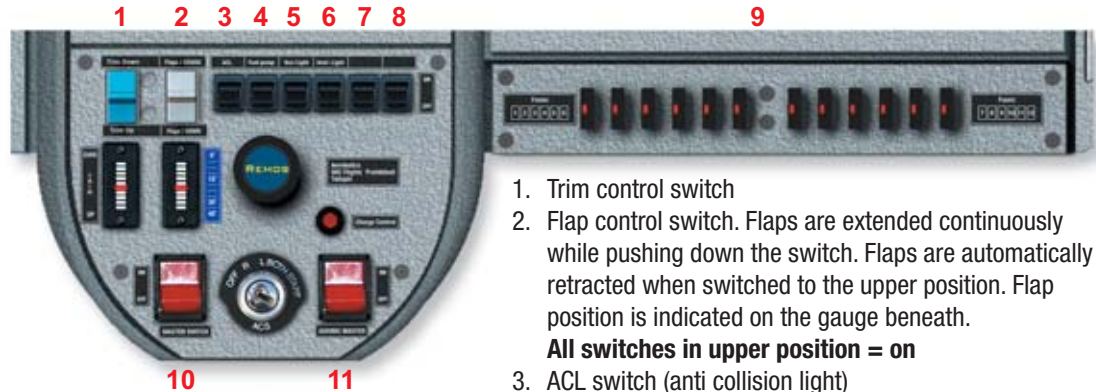


Illustration below:
Circuit breakers
and related devices
(if fitted).

1. Trim control switch
2. Flap control switch. Flaps are extended continuously while pushing down the switch. Flaps are automatically retracted when switched to the upper position. Flap position is indicated on the gauge beneath.
All switches in upper position = on
3. ACL switch (anti collision light)
4. Electric fuel pump
5. Position lights
6. Instrument/avionics illumination (if installed)
7. *Landing light (optional)*
8. *Not used*
9. Circuit breakers for master & avionics circuits
10. Master switch (all electric systems on or off)
11. Avionics master switch (all devices connected to the avionics bus, fuse 7-12, on or off)

Caution! Do not switch off with engine running, because serious damage to avionics components could occur!

Main Fuses: (Master Switch)	1	Master Fuse	25 A
	2	Clock, Temp. Gauge Memory	3 (6) A
	3	Fuel Pump, Position Lights, ACL	10 A
	4	Landing- Instr. Lights, Volt-, Fuel Gauge, Eng. Gauges	10 A
	5	Trim, Flap Drive	10 A
	6	Starter Relay, Adjustable Prop, Constant Speed	10 A
Avionics-Fuses: (Avionics Switch)	7	GPS, 12V Receptacle	10 A
	8	Flight Computer, Directional Gyro	10 A
	9	EFIS/PFD, Attitude Gyro	10 A
	10	EFIS/MFD, Turn Indicator	10 A
	11	Transponder, Blind encoder	10 A
	12	Radio, Intercom	10 A

Charge Fuse:

30 A

(engine comp.)

REMOS G-3600

2 Airplane Systems and Description

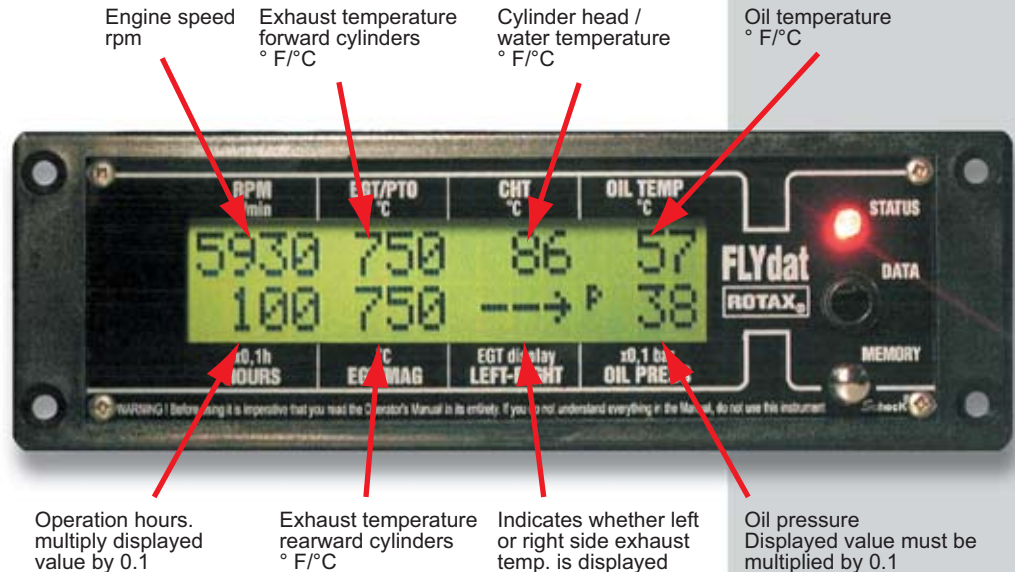
2.9 Engine control gauges (Rotax Flydat)

The **Rotax Flydat** provides the following engine gauges:

- Engine speed gauge
- Operation hour gauge
- Exhaust temperature gauge
- Water temperature gauge
- Oil temperature gauge
- Oil pressure gauge

Illustration below:

An special placard on the panel shows the limits for rpm, oil- and water temperature, oil pressure and exhaust temperature. For further information please refer to the Rotax user manual.



RPM 5800/6000	EGT 1600/1650°F	CHT 300/320°F	OIL-T 280/300°F
Warning-Limit/ Alert-Limit	EGT 1600/1650°F		OIL-P max. 72/100 min. 29/12

2 Airplane Systems and Description

2.10 Additional gauges

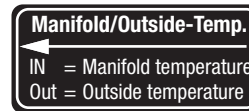
Electrical fuel quantity gauge (basic equipment)

For a comfortable fuel quantity reading an electrical fuel gauge is provided with the basic equipment of your REMOS G-3 /600, additional to the fuel level sight gauge. If the needle indicates "zero", there are 0.5 gallons left in the fuel tank. For flight safety it is strongly recommended to double check the reading on the level sight gauge.



Manifold/outside temperature gauge (optional)

This digital temperature gauge enables a precise measurement of manifold and outside temperature. An alert function indicates when carburetor heating is recommended. Alert temperature threshold is adjustable.



6

1. Choose between carburetor/manifold temperature and outside temperature (see left).
2. Adjust alert temperature.
3. Reset button
4. Choose temperature to be displayed (manifold/outside).
5. Alert tell tale, to indicate that true temperature is below alert temperature setting. Recommended: 55°F.
6. Instruction placard

For detailed information please refer to the separate operators manual.

3 Operating Limitations

3.1 Airspeed limits (all airspeeds at maximum takeoff weight)

Mark.	Speed	CAS	Description
V _{NE}	Never exceed speed	153 mph 133 kts	Airspeed which shall never be exceeded.
V _H	Maximum speed in level flight	137 mph 119 kts	Maximum airspeed at maximum continuous power setting.
V _A	Maneuvering speed	98 mph 85 kts	Maximum airspeed for all permissible maneuvers.
V _B	Maximum airspeed in turbulence	123 mph 107 kts	Airspeed which shall never be exceeded in gusty weather conditions.
V _{FE}	Speed range Flaps extended	45 to 81 mph 39 to 71 kts	Airspeed which shall never be exceeded in flaps down configuration.
V _{S0}	Minimum airspeed Flaps extended (40°)	45 mph 39 kts	Minimum permissible airspeed in flaps down configuration.
V _S	Minimum airspeed Flaps retracted (0°)	49 mph 42 kts	Minimum permissible airspeed in flaps up configuration.
V _{Approach}	Approach airspeed	59 mph 51 kts	Recommended airspeed for approach with full payload.

3 Operating Limitations

3.2 Crosswind and wind limitations

This aircraft must be flown under VFR flight conditions only.

Maximum permissible wind speed at takeoff and landing:	Headwind: 28 mph / 25 kts
	Crosswind: 17 mph / 15 kts

3.3 Service ceiling

Maximum permissible service ceiling:	15,000 ft
--------------------------------------	-----------

3.4 Load factors

Safe multiple load range:	+ 4 g, - 2 g
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3.5 Prohibited flight maneuvers

Flight conditions not permitted:	<ul style="list-style-type: none">● IFR flights● Aerobatics● Tailspin● Flights through or within clouds● Flights in icing conditions
----------------------------------	--

3 Operating Limitations

3.6 Center of gravity range

The permissible range for the center of gravity during flight has to be within the limits of: **9.6 thru 16.3 inch** (measured from the leading edge of the wing, close to the fuselage).

To determine the CG, the weight of the aircraft has to be determined, equipped with all devices ready to fly except fuel and baggage.

2.10 Permissible flight maneuvers

The following maneuvers are permitted:

- Stall
- Night VFR flights *
- Slow controlled figure-eight
- Turns
- Maximum angle of bank 60°

* Permissible only with the REMOS Night-VFR Kit installed according to Section 16, REMOS G-3/600 Maintenance Manual, issued July 1st 2008.

4 Weight and Balance Information

4.1 Installed equipment list

To comply with the rules of the Light Sport Aircraft airworthiness, the listed minimum instrumentation and equipment is provided as standard equipment.

- Airspeed indicator
- Altimeter
- Vertical speed indicator
- Compass
- Slip indicator
- RPM gauge (Rotax Flydat)
- Oil pressure gauge (Rotax Flydat)
- Oil temperature gauge (Rotax Flydat)
- CHT gauge (Rotax Flydat)
- Exhaust gas temperature gauge (Rotax Flydat)
- Electric fuel gauge
- Position lights
- ACL (Anti Collision Light)
- Master-, avionics and engine kill (ignition) switch
- Electrical system including circuit breakers
- 4-Point safety belts (pilot and passenger)

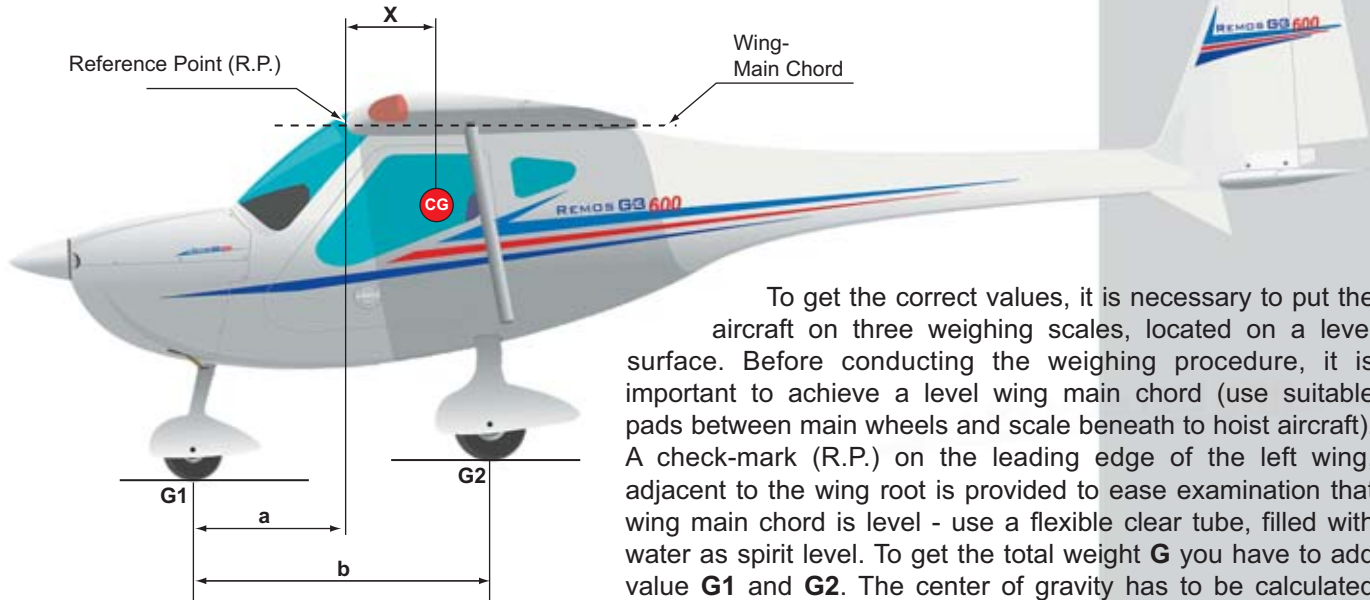
4.2 Weight and balance form

The complete equipment list including all additional and optional equipment has to be listed in the separately provided weight and balance form. The CG determination shall refer to the valid weight and balance form.

4 Weight and Balance Information

4.3 Center of gravity (CG) range and determination

To determine the real weight and the center of gravity, it is required to follow the descriptions below.



To get the correct values, it is necessary to put the aircraft on three weighing scales, located on a level surface. Before conducting the weighing procedure, it is important to achieve a level wing main chord (use suitable pads between main wheels and scale beneath to hoist aircraft). A check-mark (R.P.) on the leading edge of the left wing, adjacent to the wing root is provided to ease examination that wing main chord is level - use a flexible clear tube, filled with water as spirit level. To get the total weight **G** you have to add value **G1** and **G2**. The center of gravity has to be calculated using this value. The "CG" located at the distance (X) from R.P. is measured near the fuselage.

4 Weight and Balance Information

4.4 CG-calculation

The following procedure allows the correct calculation for the center of gravity.

$$\text{Torque (lb-Inch)} = \text{Weight (lb)} \times \text{Leverarm (Inch)}$$

$$\text{Center of Gravity (Inch)} = \frac{\text{Total Torque (lb-Inch)}}{\text{Total Weight (lb)}}$$

	Weight lb	Leverarm Inch	Torque lb-Inch
Empty weight	_____	_____	_____
Seats	_____	8.3	_____
Fuel	_____	37.8	_____
Luggage	_____	37.4	_____
Total Weight:	_____	Total Torque:	_____

The permissible CG range, measured from R.P. must be within 9.6 and 16.3 inch.

4 Weight and Balance Information

4.5 Calculation example

This example shows how to calculate the center of gravity

	Weight lb	Leverarm Inch	Torque lb-Inch
Empty weight	670	12.5*	8375
Seats	175	8.3	1452.5
Fuel	120	37.8	4536
Luggage	30	37.4	1122
Total weight:	995	Total torque:	15485.5

* = CG of the empty weight, refer to aircraft specific weight and balance form, or see page 29 in this handbook.

$$\text{Center of Gravity (Inch)} = \frac{\text{Total Torque (lb-Inch)}}{\text{Total Weight (lb)}} = 15.56 \text{ Inch}$$

Calculation example for payload

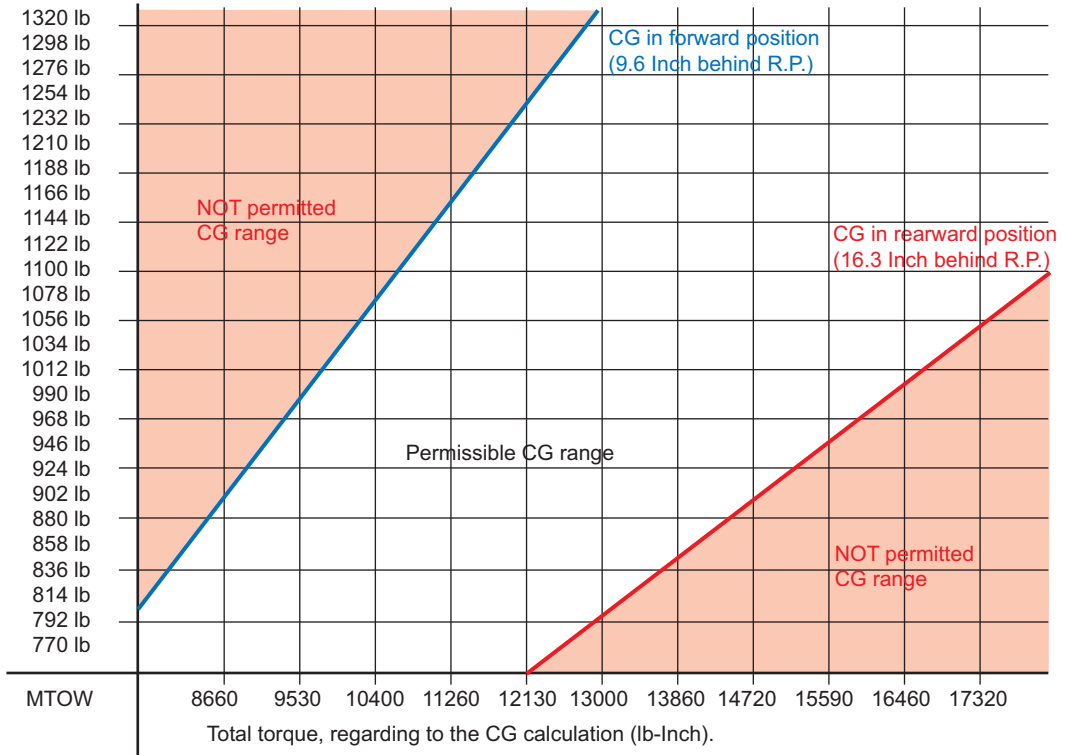
In the examples below the max. takeoff weight is 1320 lb at an empty weight of 670 lb.

A. Fuel quantity 10 gallons = 60 lb
Permissible payload: = 590 lb

B. Fuel quantity 20 gallons = 120 lb
Permissible payload: = 530 lb

4 Weight and Balance Information

4.6 CG-Diagram



4 Weight and Balance Information

4.7 Aircraft specific weights

Below the aircraft specific data shall be notified. Pilots must use this information to ensure a correct weight and balance calculation prior to every flight. This is essential for a safe conduction of each flight.

Empty weight: lb

Maximum take-off weight: lb

Maximum payload: lb

Center of Gravity "CG": inches behind R.P.

5 Performance

5.1 Takeoff and landing distances

Distance	100 hp engine
Takeoff run distance	~ 330 ft
Takeoff distance* (flaps 0°)	~ 730 ft
Takeoff distance* (flaps 15°)	~ 660 ft
Landing distance	~ 850 ft

5.2 Rate of climb

Description	100 hp engine
Airspeed for best climbing	63 mph / 55 kts (5100 rpm)
Maximum climb rate	1300 fpm
Descent rate at idle	400 fpm
Airspeed for best gliding	60 mph / 52 kts (flaps 15°)

* wind calm, over 50 ft obstacl, in ICAO standard atmosphere conditions.

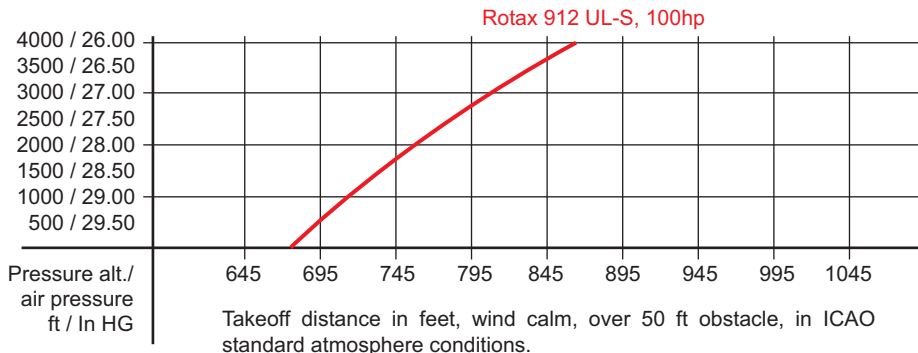
5 Performance

5.3 Takeoff distance effected by external circumstances

Various circumstances have an effect to the takeoff distance of the aircraft. The following listing gives you some suggestions about the values:

- High grass + 15 to 20 %
- Dirty wings / rain drops + 10 to 15 %
- High air temperatures +5 to 10 %
- Nose wind component - 20 %
- Tail wind component + 15 to 20 %

5.4 Take-off distance effected by pressure altitude



5 Performance

5.5 Cruise speeds, RPM, fuel consumption and range

Rotax 912 UL-S / 100 hp engine

Engine speed rpm	Manifold Pressure InchHG	Fuel Consumption gph	True Airspeed at 3000 ft, mph / kts	Maximum Endurance hr : min.	Maximum Range NM
5300	-	6.3	138 / 120	-	-
5100	-	5.5	132 / 115	3:35	408
5000	-	4.6	126 / 110	4:20	473
4800	-	4.2	120 / 104	4:45	494
4600	-	3.7	114 / 99	5:24	534
4400	-	3.2	105 / 91	6:15	568
4200	-	2.7	98 / 85	7:25	629
4000	-	2.4	92 / 80	8:20	666

All values concerning the 21 gallon fuel tank system (20 gallons usable), within the ICAO standard atmosphere.

6 Emergency Procedures

This chapter will show you all the procedures which have to be applied in case of an emergency or another dangerous situation.

You will also get important information regarding the use of the recommended rescue system.

6.1 Door emergency eject

1. Unlock the doors, by rotating back the door lock handle.
2. Unlock the door hinges by pushing the securing pin (red knob) forward. Do not throw away this pin!
3. Push out the unlocked door by hand.

6.2 Recovering from stall

Push the control stick forward carefully, until the indicated airspeed comes to the normal operation range.

6 Emergency Procedures

6.3 Rescue system (optional equipment)

The installation of the rescue system shall be carried out complying with the recommendations of the manufacturer. To do so, the aircraft is already prepared for the installation of an BRS rescue system. For maximum safety there are Kevlar bridles used, to connect the parachute with the main spar in the wing/fuselage section. These bridles are built into the fuselage, protected from dust and dirt (see illustration right). They need not to be controlled or serviced, access is only possible by destroying the top skin of the fuselage. A special steel clamp is used to connect the bridles with the rescue system, which has to be inspected to assure that it is fixed securely before each flight.

Attention: Do not make changes or modifications to any part of the rescue system to guarantee safety and proper operation.

Follow the recommendations published by the manufacturer of your installed system and pay special attention to the maintenance intervals.

Attention:

Before each flight please remove the securing pin at the emergency handle of the rescue system so the system is ready for use in case of an emergency. Reinstall the pin after each flight, so that the rescue system cannot be activated by mistake.

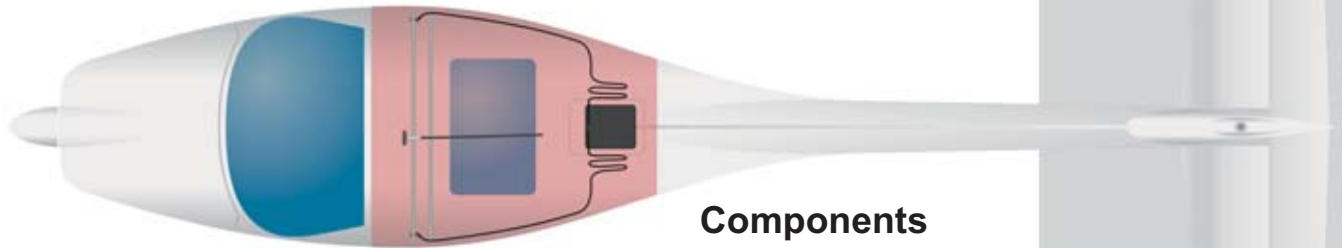
6.4 Operating the rescue system

1. Stop the engine by switching off the ignition
2. Pull out the emergency handle

Refer to the BRS operators manual for detailed advisory.

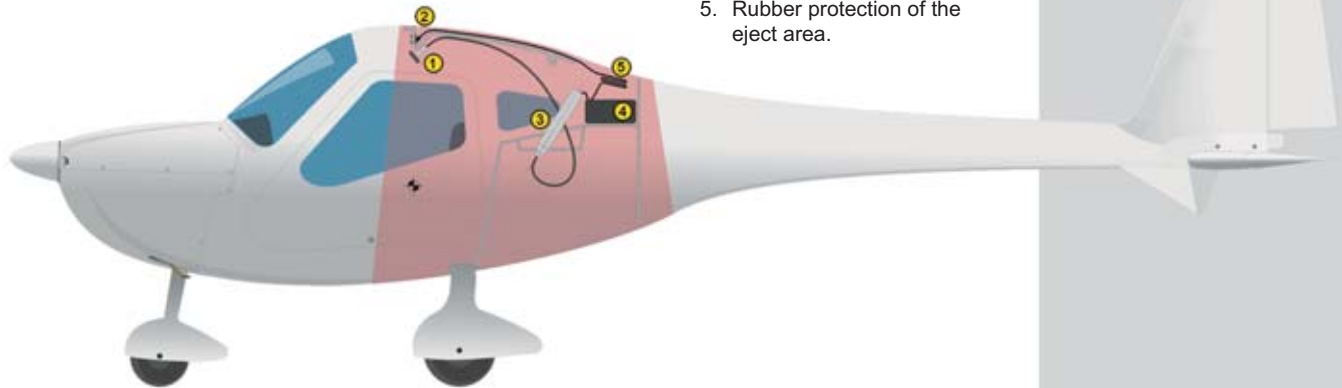
6 Emergency Procedures

6.5 Illustrated rescue system installation



Components

1. Emergency handle
2. Connection kevlar bridles to main spar
3. Recovery system rocket
4. Softpack parachute
5. Rubber protection of the eject area.



6 Emergency Procedures

6.6 Engine failure / Loss of power before takeoff

If any trouble regarding engine power is determined during taxiing or take-off run, the following procedures shall be applied:

- Pull throttle lever to idle position
- Activate wheel brakes by pushing the brake lever carefully
- Stop the engine and determine the problem and remedy or repair as necessary

6.7 Engine failure after takeoff

If the engine fails during climbing after takeoff, apply the following procedures:

A) Below 500 ft above ground

- Push the control stick forward carefully to get into a safe airspeed range
- Cut off ignition and close fuel valve
- Touch down straight forward, or choose a suitable landing field, depending on obstacles and pilot experience

B) More than 500 ft above ground

- Push the control stick forward carefully to get into a safe airspeed range
- Shut-off ignition and close fuel valve
- Touch down straight forward, or make a turn back to the airfield, or to a suitable landing field, depending on obstacles and pilot experience

6 Emergency Procedures

6.8 Engine failure in flight

If the engine fails during flight, check the fuel level first. Now try to get the engine started again. If the engine does not start again, an emergency landing in gliding configuration has to be conducted.

6.9 Emergency landing procedure

- Determine the wind direction
- Search for a possible landing area - pay attention to the wind direction
- Touch down into the wind, if at all possible

6.10 Minimum gliding ratios

The following table shows, what distances can be flown in gliding configuration (engine shut-off) from different altitudes.

Flight level in ft	400	800	1000	1500	3000
Distance in NM	1.0	2.0	2.5	4.0	7.5

6 Emergency Procedures

6.11 In-flight engine fire procedures

- Shut-off fuel flow by closing the fuel valve
- Push the throttle lever fully forward until engine stops
- Try to extinguish the flames by a fast descent carried out as slip
- Land as soon as possible

6.12 Emergency landing on water

- The final approach has to be carried out into the wind
- Cut off the ignition and close the fuel valve
- Eject the doors
- Touch down on the water surface with minimum possible airspeed
- Unbuckle and exit the aircraft immediately after touch down

6.13 Recovery from unintended spin

It is generally prohibited to carry out an intentional spin, but if an unintended spin has to be recovered, please follow the procedures below:

- Move rudder and control surfaces to neutral position
- Apply rudder against spin direction
- After spinning stops, apply elevator carefully to recover normal flight condition

It is most important that **in no case** you shall try to stop spinning by the use of the ailerons, because this will not stop the spin!

7 Normal Procedures

This chapter provides you with all the procedures for normal operation of the aircraft including preflight preparations.

7.1 Preflight check

Before each flight the following checks have to be conducted:

Checks outside the aircraft

1. Before moving the aircraft: drain possible water from the fuel tank, using the drain valve
2. Check the engine oil level*
3. Check level of the engine coolant (between min. and max. marking)
4. Check proper condition of engine mounting
5. Check mounting of the exhaust system
6. Check all water hose connections
7. Check that the cowling is closed and properly secured
8. Check propeller for damage and wear
9. Check gear and wheels/tires for damage, wear and air pressure
10. Check wings and control surfaces for damage
11. Check main bolts, struts and stabilizers for damage
12. Check all control surfaces and connections for proper operation
13. Check for free and full travel of all control surfaces
14. Check pitot tube, static tubes and hoses for damage and dirt
15. Check fuel level and tank filler cap
16. Check rescue system emergency handle (secured)
17. Check that both seats are properly secured in position

Important:

* to check the oil level, it is important to turn the propeller a few times in operating direction till you can hear some kind of bubbling noise coming out of the oil expansion tank. Ensure that the ignition key has been removed before turning the propeller. This is the only way to check the engine oil level correctly.

7 Normal Procedures

Checks inside the aircraft

1. Close and lock both doors
2. Buckle up
3. Set the parking brake
4. Check for free travel of all control surfaces
5. Check proper functioning of the flap drive and gauge
6. Set oil temperature regulator flap (if fitted) to take-off position
7. Remove rescue system securing pin from emergency handle
8. Open fuel valve

7.2 Engine starting

NEVER start the engine without being in the cabin, at the controls with the doors closed and locked. Now switch on the master switch, the ACL and ensure that the propeller area is clear.

Starting a cold engine:

1. Pull the throttle lever back to the idle position
2. Pull out choke lever
3. Switch on electric fuel pump
4. Turn the key clockwise to the "Start" position until the engine has started (do not hold the key in the "Start" position for more than 10 seconds, in order to avoid overheating the starter)

continued next page

7 Normal Procedures

continued from previous page

If the engine does not start, release the key to position "0", wait 2 minutes and repeat the procedure.

5. Release ignition key, immediately after the engine has started
6. Push the choke lever forward
7. Switch off the electric fuel pump

Starting a hot engine:

1. Pull the throttle lever back to the idle position
2. Turn the key clockwise to the "Start" position until the engine has started (do not hold the key in the "Start" position for more than 10 seconds, in order to avoid overheating the starter)
3. Release ignition key immediately after the engine has started

After starting the engine:

1. Check oil pressure immediately after the engine has started
2. Adjust engine rpm as required - for warm up **maximum 2500 rpm**
3. Before take-off, oil and water temperature must reach at least **120°F**
4. Switch on avionics master switch and avionics as required

Engine rpm and propeller check:

1. Set parking brake
2. Adjust engine to **4000 rpm**
3. Check both magnetos - maximum rpm decrease 300 rpm
4. Set engine to idle, release parking brake

7 Normal Procedures

7.3 Taxiing

The steerable nosewheel of the REMOS G-3 /600 allows easy ground handling. Turns of 49 feet in diameter can be conducted easily. The main gear is equipped with effective hydraulic disc brakes, which are operated by a lever on top of the middle section between the seats.

7.4 Normal takeoff

1. Set flaps to the 15° position
2. Set electric trim to neutral position
3. Switch on electric fuel pump
4. Move rudder and elevator to neutral position (at crosswind, aileron in wind direction)
5. Move throttle lever to full power position
6. After reaching a speed of about 35 mph (30 kts), gently raise the nose
7. The aircraft will be airborne after exceeding a speed of about 46 to 52 mph (40 to 45 kts)

The minimum engine speed for takeoff is 4900 rpm.

Remark: Take-off from concrete or hard surface runways can be done also with flaps in retracted position (0°, flaps up).

7 Normal Procedures

7.5 Best angle of climb speed (V_X)

The best angle of climb is at an airspeed of 58 to 64 mph (50 to 55 kts). Please watch oil and water temperature during long climbing periods. If an oil temperature regulation flap is mounted, it must be set to position "open" or "cooler".

Flight conditions: Full throttle, flaps up, within the ICAO standard atmosphere.

7.6 Best rate of climb speed (V_Y)

The maximum climb rate of 1300 ft/min. with fixed pitch propeller is at an airspeed of about 72 to 76 mph (63 to 66 kts). Please watch oil and water temperature during long climbing periods. If an oil temperature regulation flap is mounted, it must be set to position "open" or "cooler".

Flight conditions: Full throttle, Flaps up, within the ICAO standard atmosphere.

7.7 Cruise

For continuous operation the engine speed must not exceed 5300 rpm. In no case the maximum permissible airspeed (V_{NE}) of 153 mph (133 kts) shall be exceeded.

Recommended power setting for continuous cruise: 4800 to 5000 rpm.

7 Normal Procedures

7.8 Approach

To prepare for approach, switch on the electric fuel pump and set the elevator trim to the neutral position and set carburetor heat to "warm" as necessary. When entering final, we recommend establishing an airspeed of 60 to 63 mph (52 to 55 kts) and extending flaps to the 40° position.

7.9 Normal landing

The airspeed for touch down should indicate about 40 mph (35 kts) with flaps down (40°) and 45 mph (39 kts) with flaps up (0°). The touch down should be first onto the main gear. The maximum permissible crosswind component must not exceed 17 mph (15 kts). In a headwind component of more than 17 mph (15 kts) it is recommended to carry out the landing with a flaps setting of 15°.

7.10 Short field takeoff

To conduct a short field takeoff, set flaps to 15° position, apply brakes and move the throttle to the full power position. Release brakes. Proceed as normal takeoff. After the aircraft is airborne, establish an airspeed of 57 to 63 mph (50 to 55 kts) until all obstacles are cleared.

7.11 Aborted landing procedure

Apply full throttle, establish an airspeed of 57 to 63 mph (50 to 55 kts) while climbing. After all obstacles have been cleared then retract flaps. Climb to required altitude while increasing airspeed to 72 to 76 mph (63 to 66 kts).

7 Normal Procedures

7.12 Low airspeed and stall

The center of gravity is within the permissible range, the aircraft will be fully be controllable until reaching the stall speed. If stall speed is reached, the pilot should lower the nose of the aircraft to reestablish a safe airspeed.

Performing a stall from level flight

CG at most rearward position (airspeeds as CAS)

Flap position	0°	15°	40°
V _{min} at idle	42 mph / 37 kts	39 mph / 34 kts	38 mph / 33 kts
V _{min} at full power	41 mph / 36 kts	38 mph / 33 kts	36 mph / 31 kts

CG at most forward position (airspeeds as CAS)

Flap position	0°	15°	40°
V _{min} at idle	45 mph / 39 kts	44 mph / 38 kts	43 mph / 37 kts
V _{min} at full power	45 mph / 39 kts	42 mph / 36 kts	37 mph / 32 kts

7 Normal Procedures

Performing a stall in turns

CG at most rearward position (airspeeds as CAS)

Flap position	0°	15°	40°
V _{min} at idle	45 mph / 39 kts	42 mph / 37 kts	40 mph / 35 kts
V _{min} at full power	44 mph / 38 kts	40 mph / 35 kts	38 mph / 33 kts

CG at most forward position (airspeeds as CAS)

Flap position	0°	15°	40°
V _{min} at idle	47 mph / 41 kts	45 mph / 39 kts	44 mph / 38 kts
V _{min} at full power	45 mph / 39 kts	43 mph / 37 kts	39 mph / 34 kts

As the aircraft approaches the stall speed, this will be indicated by slight aerodynamic buffeting. The stall speed is reached when the aircraft becomes unstable in flight, but should still be controllable. It is also possible to perform a stall while in a turn, but it has to be considered that the stall speed will increase (see table above).

8 Aircraft Ground Handling and Servicing

8.1 Servicing fuel, oil and coolant

The REMOS G-3 /600 is designed to be easily serviceable. Access to all components which have to be lubricated or checked regularly is possible without detaching any panels. A flap in the upper cowling allows checking water and oil without removing the cowling.

The fuel filler cap is located on the right-hand side of the fuselage behind the wing. After removing the lockable fuel filler cap, refueling is easily possible. The basic equipment provides two gauges to check fuel level from inside the cockpit.

The first one is a fuel level sight tube located between the seats and an additional electric fuel gauge is installed on the right-hand side of the instrument panel.

Refer to Chapter 2 "Airplane and Systems Descriptions" for further instructions regarding specifications and capacities.

8.2 Towing and tie-down instructions

Due to the low weight of the REMOS G-3 /600 it is very easy to move the aircraft on the ground by hand. That's why there is no special equipment for towing provided. In no case the aircraft shall be towed by attaching any kind of towing equipment to the nose wheel!

To tie the aircraft we recommend the use of three ropes (left wing, right wing, and tail). Tie down each wing by attaching the rope to the strut bracket (top end of each strut). In addition you should connect a third rope to the latch on the small tail wheel.

When necessary, a fourth rope can be slid around the propeller/gear drive shaft at the nose of the aircraft.

8 Aircraft Ground Handling and Servicing

8.3 100/200 hr service / 12 month inspection

The first after sales service has to be carried out after 20 hours of flight time. Thereafter, every 100 hours or at least every 12 months the aircraft has to be maintained following the REMOS maintenance checklist. **Refer to the detailed factory checklist!**

1. Visually check the outer skin of the aircraft for scratches, dents and other damage.
2. Change the engine oil (about 0.8 gallon) and the oil filter element.
(Some operating conditions require more frequent oil and oil filter changes).
3. Check for leaks and secure attachment of all hoses, tubes and cable connections as well as for possible damage to the hoses, tubes and cables and fittings.
4. Perform maintenance of the engine per the engine manufacturer's recommendations.
5. Visually check the engine mounting frame and the proper and secure attachment and location of all other components in the engine compartment.
6. Lubricate wing main bolts and horizontal stabilizer attachment bolts, using regular grease.
7. Lubricate wings' plastic ball joints, using regular grease.
8. Check all joints, bolts, nuts, splines for correct seating.
9. Field test of wheel brakes and inspect brake pads/discs for wear (exchange if necessary).
10. Check tires (air pressure, profile and entire surface for wear and damage).
11. Check wings, rudder, stabilizer, and landing gear for damage and proper attachment and connection to the fuselage.
12. Check control cables and control linkage tubes for freeplay, damage or cracks.
13. Check propeller and spinner for cracks and other damage (replace if necessary).
14. Check and lubricate tow release clutch (if fitted).

Every 200 hours, spark plugs have to be exchanged.

8 Aircraft Ground Handling and Servicing

8.4 300 hr service

Every 300 hours, the following additional checks/services are required:

1. Exchange brake fluid (DOT 4 - aircraft brake fluid must **NEVER** be used)
2. Check carburetors for wear and correct adjustment (carburetor synchronization)
3. Check control wires of choke, throttle, propeller, tow release clutch (if fitted) and oil-cooler flap for corrosion and free play
4. Check main gear bolts and bushes for corrosion and proper seating
5. Check condition of rubber engine mounts for wear
6. Exchange engine coolant
7. Check all fuel, coolant and oil hoses and fittings for wear and cracks
8. Check main gear for damage and cracks

8.5 Cleaning and care

After every flight, especially in warm climates, it is recommended to clean the surface of the aircraft using pure water and a soft cotton towel only. Take special care when cleaning the windows to use lots of water to loosen and rinse away bugs and dirt and use with only a soft cotton towel, or otherwise you will create scratches. If cleaned regularly, you may not need to use any special cleaning products.

If for any reason special cleaning products need to be used, please contact your dealer for advice. We have approved several products for each area of cleaning, please ask for an appropriate recommendation.

Furthermore, we recommend the polishing of the whole aircraft once per year. You can use almost any car polish but be sure that no silicone is used in that product. Be careful that windows are not touched with polish.

8 Aircraft Ground Handling and Servicing

8.6 Folding wing system

The G-3 /600 is manufactured at highest quality standards, all components are highly accurate and provide a maximum aerodynamic quality. It is therefore strongly recommended to be most careful when assembling or disassembling components like the wings, stabilizer and other parts. To fold or attach the wings, two persons are required. The following instructions will provide you with all the necessary information.

8.7 Preparation for assembling and disassembling

For assembling and disassembling the wings no additional tools are required, except the special tool for attaching and removing the wing and stabilizer bolts. This tool is provided with the basic equipment for the aircraft.

To prepare for assembling the stabilizer, place the stabilizer behind the aircraft on an appropriate foam support (take care to avoid scratches and dents). Remove both stabilizer bolts from their bushes on the stabilizer and place them nearby (prepare with grease).

If you intend to move the aircraft by trailer or to store it with wings folded, we recommend using our wing securing aids (see illustration on the right). With these supports mounted, wings are secured properly and the handling of the aircraft will be much easier.

When the aircraft has to be moved by trailer, please ask your authorized REMOS dealer for advice. When placed on a trailer in a wrong way, serious damage could result.



Wing securing aids

8 Aircraft Ground Handling and servicing

8.8 Connecting folded wings to fuselage

1. Withdraw the main wing securing bolt from the wing and place it nearby. Ensure that the bolt stays clean till remounted.
2. Remove the wing support aid bracket while a second person is supporting the wing at the wing tip.
3. Now the second person at the wing tip moves the wing slowly forward while securing that the wing does not spin around its axis. The weight of the wing is supported by its strut, therefore, the wing must never be lifted or pushed on top.
4. When the wing has reached its forward position, the person at the fuselage position has to rotate the wing to align both connection latches. Care has to be taken, that the surface of the wing is not damaged by the fuselage connecting latches.
5. When the connection latches between the fuselage and wing are aligned, the wing must be lifted by the person at the wing tip. The person at the fuselage must ensure that flap drive connection fits correctly into the bushing on the fuselage.
6. If all latches have engaged and the wing fits properly to the fuselage, the main bolt can be pushed into its support tube. To install the main bolt correctly, please use the special installation tool which comes with the aircraft. Now secure the bolt with the securing pin.
7. The person at the wing tip can now release the pressure supporting the wing tip. Inside the cabin, the pushrod connection of the ailerons **MUST** be established.
8. Proceed in identical order with the second wing.

8 Aircraft Ground Handling and Servicing

8.9 Installing horizontal stabilizer

Like connecting the wings it is recommended to follow this procedure by two persons. One person is needed to hold the stabilizer in place, while the second person applying the two fixing bolts into their bushes through the fuselage tail. Afterwards each bolt have to be secured by a cowl pin.

Attention: watch for the markings on the stabilizer bolts, because they are different in length! The forward bolt is marked by a "V", the rearward bolt by "H". At the end of each bolt you will find a little hole. Once the bolt is installed, this hole must be aligned with the appropriate hole of the stabilizer bush to fit the cowl pin.

Now you can connect the cable plug for the electric trim and the elevator pushrod (same as aileron connection). Finally attach the tail cover and fix it by two screws.

8.10 Final check after assembling

As final step, you have to attach the pitot tube and make sure, that all connections are fitted properly and secured as required. Make sure that all control surfaces are working without friction and full travel is provided.

8.11 Disassembling the aircraft

To disassemble the aircraft you have to do the above described procedures in reverse order.

8 Aircraft Ground Handling and Servicing

8.12 Airframe servicing

The body design of the G-3 /600 consists from carbon fiber materials, which ensures extreme strength and a long lifetime of the whole aircraft. Maintenance is reduced to checks of the moving parts such as: locks, hinges and connections. Prior to each flight a visual check of the whole surface for cracks, dents or other damages should be conducted. Damage to the airframe (composite bodywork) must be repaired by skilled and authorized persons only.

Repairs and services may only be conducted using REMOS original replacement parts. The use of parts or materials not certified by REMOS aircraft is not permissible!

8.13 Main gear servicing

The main gear is made from glass fabrics with no metal reinforcements. As with the fuselage, the main gear requires no regular servicing. The hydraulic hoses of the brake system are located within the hollow gear legs. A visual check for scratches, cracks and tire condition has to be carried out prior to each flight. Repair works to the fiberglass main gear must only be conducted by skilled and authorized persons. Air pressure within the tires should be maintained at 29 to 34 psi. Please also check slip marking on each wheel prior to every flight.



8 Aircraft Ground Handling and Servicing

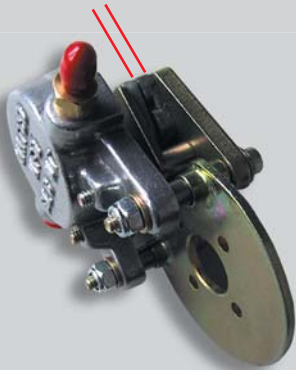
8.14 Nose gear servicing

The nose gear consists of a glass fiber nosewheel fairing by which the wheel axle is carried, guided by a steel tube with a spring suspension system and shock absorbing components. The nose gear needs no special servicing between regular service intervals. A visual check for scratches, cracks and tire condition has to be carried out prior to each flight. Repair works to the fiberglass nose gear must only be conducted by a skilled and authorized person.

8.15 Hydraulic brakes

The standard brake system used in the REMOS G-3 /600 is a hydraulic system with a disc brake on each wheel of the main gear. A master cylinder mounted between the seats allows a sensitive control of brake performance. The brake fluid reservoir is located behind the master cylinder and holds DOT 4 brake fluid (NO aircraft brake fluid can be used as its use would cause damage to the rubber seals). To check the fluid level, unscrew the cover (take care, brake fluid will cause damage to your clothes as well as injury to your skin!). The brake pads can be checked visually from beneath the wheel fairings (use a pocket light). The thickness of both brake pads, must be at least 0.08 inch. The brake pads wear very slowly, i.e. if the aircraft is used in a flight school, the brake pads will not require replacement for about 10,000 touch downs and braking maneuvers on paved surfaces. Only new, original brake pads can be used when replacing any worn pads. Brake pads must be replaced by an authorized and skilled person only.

Brake pad thickness
min. 0.08 inch



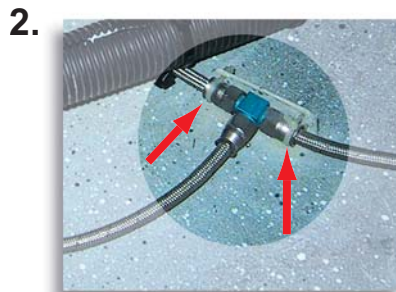
8 Aircraft Ground Handling and Servicing

8.16 Disassembling and assembling wheels

To prepare for disassembling the tires and brakes, you have to remove the luggage compartment from inside the cabin. To do so, unscrew the appropriate fixing screws and remove the luggage compartment (1). Now access to hydraulic pipes is possible, so you can remove the two cable ties (remove comma) fixing the T-connector to the bottom of the fuselage (2). After you have hoisted and supported the aircraft and removed the wheel nut, the axle can be withdrawn from the wheel spat and the complete wheel assembly can be removed from the fairing (3).



Remove the luggage compartment by unscrewing the three fixing screws.



Discard two cable ties to disconnect the T-connector from the fuselage.



Remove the wheel from the axle and withdraw the wheel-assembly from the fairing.

Watch for the assembling order of each part during disassembling. Assembling has to be carried out in reverse order. Take great care to secure all bolts and nuts as required.

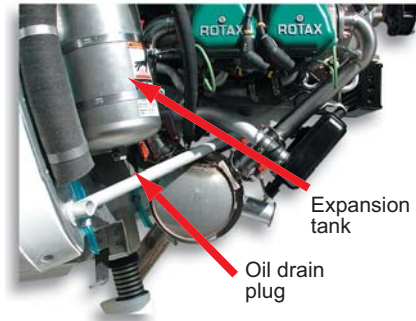
Remark:

8 Aircraft Ground Handling and Servicing

8.17 Wheels and tires

The wheels of the REMOS G-3 /600 consists of three piece aluminum wheel, equipped with multiply tires. The maximum air pressure applied in the tires must not exceed 34 psi. Low air pressure should also be avoided as it enables slip between tire and wheel which could cause damage to the air bleed valve and tube. To ensure that no slip has occurred, (remove the word 'please') check the slip markings on each main wheel prior to every flight. Whenever tires have to be replaced we strongly recommend to check the wheel discs for cracks, especially the area where the discs are screwed together. After fitting new tires, wheels have to be balanced, because badly balanced wheels will create vibrations after takeoff, during taxiing and braking.

8.18 Changing engine oil (also see Rotax operators manual)



To change engine oil, you have to spin the propeller in operation direction first, until you can hear a bubbling noise out of the oil expansion tank. Now the engine oil is transferred to the tank and it is possible to drain it completely by opening the drain plug. Do not unscrew the drain plug at the bottom of the crank case! To refill, you need about 0.8 gallons of new engine oil as recommended. Please refer also to the Rotax operators manual.



Safety main gear wheel with brake disc support

SHELL Advance semi-synthetic
10W - 40

Refer to Rotax Operator's Manual
for additional recommendations

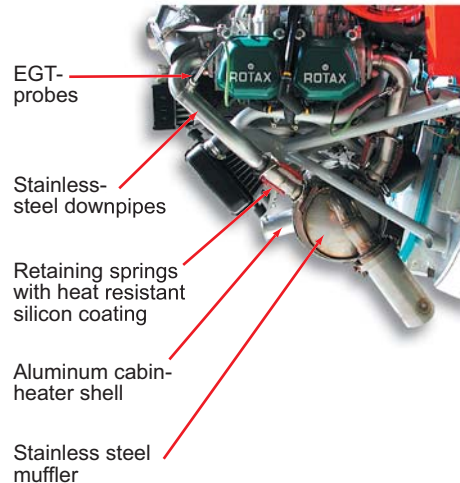
We recommend the use of:
Shell Advance 10W-40
semi-synthetic oil.

REMOS G-3 600

8 Aircraft Ground Handling and Servicing

8.19 Exhaust system servicing

The REMOS exhaust system used on the REMOS G-3 /600 is manufactured from stainless steel. To provide suitable cabin temperature, especially in cold climates, a cabin heating system is included. The muffler is held in place by eight wire springs at the connection to the down-pipes. These springs are sealed with heat resistant silicon to protect them from cracking. When reassembling the exhaust system, great care has to be taken, to ensure no part of the exhaust system touches other components in the engine compartment. No welding should be done to the muffler / cabin heater, if any cracks are visible, the muffler has to be exchanged! The exhaust system needs no servicing between regular service intervals, but we recommend to check for cracks prior to each flight.



Please take care about the following steps when reassembling the muffler:

- Use copper grease on the connections between the down-pipes and muffler.
- Seal each spring mount with heat resistant silicon, to protect against cracking.

Remark:

8 Aircraft Ground Handling and Servicing

8.20 Propeller servicing

The standard propeller on the REMOS G-3 /600 is manufactured by Tonini and is made from composite/wood providing a white lacquer finish. The propeller does not require any servicing at all.

However, we strongly recommend a visual check for cracks and damage prior to each flight. Damage to the lacquer finish may disturb the propeller balance due to the change in humidity of the wooden structure. Therefore it is essential to repair any failure of the lacquer finish immediately.

8.21 Airbox-system and air cleaner element

The REMOS air intake system consists of a carburetor heating system in conclusion with a special airbox. This system needs no servicing during regular service intervals.

An air cleaner element is installed at the air intake section of the airbox, we recommend the use of K&N air cleaner elements, part # RC-1250 (circular shape) or part # 33-2022 (rectangular shape), depending on the type of airbox installed.

If it is found that the air cleaner elements efficiency has decreased due to dust or dirt between regular service intervals, do not try to clean the element, replace it.

9 Required Placards and Markings

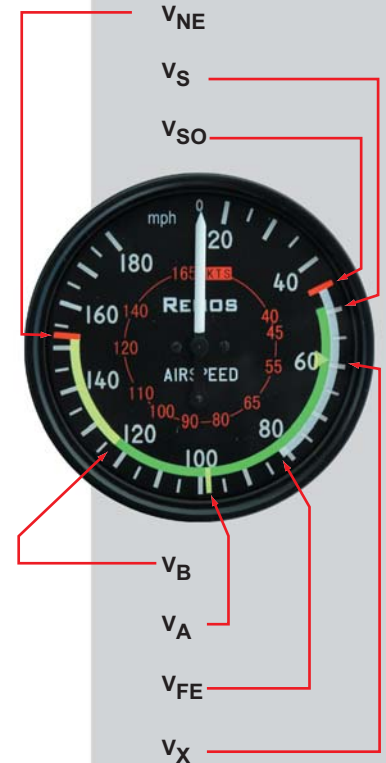
9.1 Airspeed indicator range and markings

Marking	Airspeed CAS	Description
White arc	45 to 81 mph 39 to 71 kts	Airspeed range for flaps extended
Green arc	49 to 123 mph 42 to 107 kts	Normal use
Yellow line	98 mph 85 kts	Maximum airspeed for full maneuverability
Yellow arc	123 to 153 mph 107 to 133 kts	Caution in gusty conditions
Red line	153 mph 133 kts	Maximum permissible airspeed
Yellow triangle	59 mph 51 kts	Recommended airspeed for approach and best angle of climb (V_X)

Additional placards

Calibrated airspeeds related to flight level

V_{NE}	Flightlevel MSL (m)	Flightlevel MSL (ft)
153 mph	0	0
140 mph	2000	6560
128 mph	4000	13120
116 mph	6000	19680



9 Required Placards and Markings

9.2 Operating limitations on instrument panel

The following limitation placards are applied to the instrument panel as possible or could be find inside the cabin.

Airspeed Limitations	
Maximum permissible airspeed V_{NE}	153 mph / 133 kts
Max. airspeed at high turbulences V_S	123 mph / 107 kts
Maneuvering airspeed V_A	98 mph / 85 kts
Max. airspeed flaps extended V_{FE}	81 mph / 71 kts

RPM 5800/6000	EGT 1600/1650°F	CHT 300/320°F	OIL-T 280/300°F
Warning-Limit/ Alert-Limit	EGT 1600/1650°F		OIL-P max. 72/100 min. 29/12

Weights / Crew			
MTOW max.	1320 lb	Min. Crew	1 Pilot
Empty weight	lb	Capacity	2 Seats

The empty weight value has to be completed individually with each plane.

9.3 Passenger warning

Passenger Warning
This aircraft was manufactured in accordance with Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

9.4 No intentional spins

**NO - Aerobatics
NO - IMC Flights
NO - Intentional Spins**

or

Aerobatics, IMC-Flights, Spins - PROHIBITED!

9 Required Placards and Markings

9.5 Miscellaneous placards and markings

The following safety placard is located in front of the rescue system area, indicating that no luggage or clothes should be placed there. This is a safety advisory to guarantee the proper operation of the rescue system.



Overhead each cabin door you will find the following emergency placard. This placard indicates the direction to which the door safety pin has to be removed in order to release the door from the fuselage.

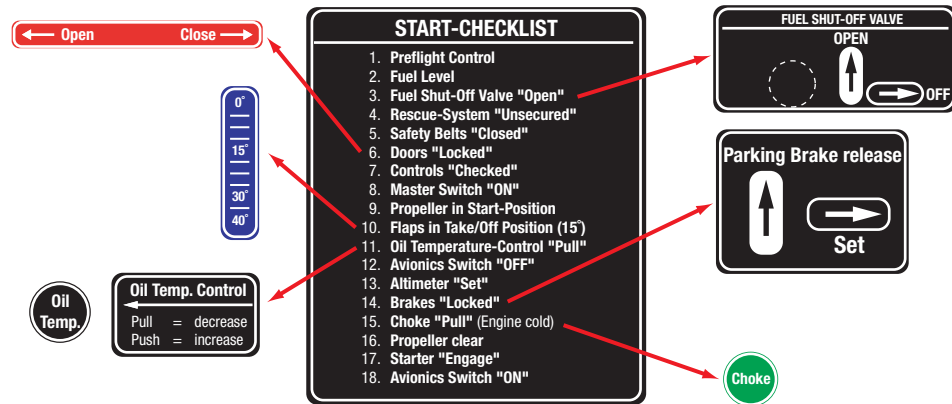


Beside the sight fuel gauge behind the seats you will find the following decal, which indicates the "fuel empty" position. When the indicated fuel quantity is level with that marked by the decal, 0.5 gallons of fuel remains in the fuel tank.

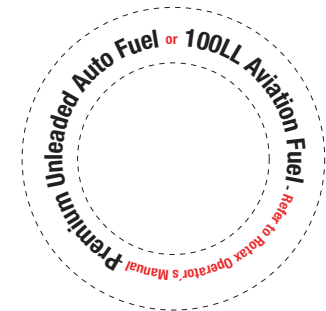


9 Required Placards and Markings

Inside the cabin a starting checklist and related placards are provided as quick reference guide for starting the engine.



Outside the cabin this placard is located by the fuel filler, it indicates the recommended fuel qualities approved for the REMOS G-3 /600. Refer to the engine operators manual to check for additional fuel types.



9 Required Placards and Markings

Outside the aircraft, located beneath each wing main bolt, you will find this safety placard, concerning safety precautions regarding the folding or reassembling of the wings.



On both sides of the fuselage, beneath each static port you will find this decal. Please keep in mind, that both static ports have to be kept clean. Dirt or water inside the static ports will create wrong indicator readings.



The following placard is attached to the wheel fairings, indicating the maximum air pressure of each tire. Do not exceed this recommended air pressure.



10 Supplementary Information

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10 Supplementary Information

10.1 Flight training supplement

10.1.1 Introduction

This chapter should enable you to familiarize yourself with the flight performance and flight characteristics of the REMOS G-3 /600. To conduct these instructions you have to refer to the appropriate chapters provided by the POH.

The following pages describe flight characteristics experienced during various flights configurations and weather conditions:

- Takeoff
- Climbing
- Cruise
- Stall
- Slip
- Gliding
- Descent
- Approach
- Touch down

This chapter was introduced only as an additional guide to experience the capabilities of the aircraft, it is not a substitute to flight school training! If you are not yet familiar with the aircraft, we strongly recommend to follow these instructions only when accompanied by a skilled flight instructor.

10 Supplementary Information

10.1 Flight training supplement

10.1.2 Takeoff

Takeoff under normal conditions

1. After the preflight check has been carried out, extend flaps to 15° position
2. Ensure that the elevator trim is in correct position
3. Whenever possible, takeoff directly into wind. The maximum crosswind limitation for takeoff is 17 mph (15 kts)
4. Smoothly apply full throttle (fully forward) and maintain runway heading
5. As the aircraft accelerates, gently pull back on the control stick to elevate the nose slightly until the aircraft becomes airborne
6. Once airborne, slowly release the back pressure on the control stick to allow the airspeed to increase to 63 mph (55 kts). Maintain this speed and avoid making any climbing turns until a sufficiently safe altitude has been reached
7. When all obstacles have been cleared, retract the flaps (0° position)

Takeoff at tailwind conditions

Similar to normal take-off except an extended takeoff run distance.

The takeoff run distance is affected by weather and surface conditions, as well as the takeoff weight of the aircraft. However, average distance is 170 to 330 ft.

10 Supplementary Information

10.1 Flight training supplement

10.1.3 Climbing

Climbing after takeoff

Once airborne, establish an indicated airspeed of 75 to 80 mph (65 to 70 kts). This airspeed will achieve the aircraft's best rate of climb, resulting in a 1100 to 1300 ft/min climb rate. During the climb it is essential to watch oil- and water (CHT) temperatures. Adjust the oil temperature regulation flap as required.

Climbing while in cruise

If you have to climb in cruise, select an airspeed between 80 to 92 mph (70 to 80 kts). At these speeds, the aircraft will climb between 600 to 800 ft/min, depending on weather conditions, altitude and weight of the aircraft.

It is strongly recommended to watch oil- and water (CHT) temperatures. Under no circumstances should any of the engine temperature limits be exceeded, otherwise, an engine failure may result.

Emergency climbing

If you have to climb at a maximum angle due to any circumstances, we recommend to establish an indicated airspeed of 57 to 63 mph (50 to 55 kts) with maximum power setting (yellow triangle on the airspeed indicator). This will give you the maximum angle of climb at a minimum horizontal speed. Watch engine temperatures during the climb!

10 Supplementary Information

10.1 Flight training supplement

10.1.4 Cruise

Normal cruise

The maximum continuous cruising speed in level flight and calm weather conditions is 123 to 126 mph (107 to 110 kts). To achieve these airspeeds, a 75% power setting is required, which results in an average fuel consumption of 4.8 to 5.5 gallons per hour. Fuel consumption is variable, depending on external circumstances like temperature, air pressure and payload of the aircraft.

The most effective economic cruise speed is at an indicated airspeed of 115 mph (100 kts). At this speed a fuel consumption of 4.2 gph or less will result, giving you a maximum range up to five hours of flight time.

Once the aircraft is trimmed well, it will maintain its altitude and heading without doing any correction to the control stick for extended periods. If required, the aircraft is capable of achieving an airspeed up to 138 mph (120 kts) at full power setting. If doing so, it is strongly recommended not to exceed the maximum continuous engine rpm for more than five minutes (Please refer also to the latest engine operators manual).

Cruising in gusty conditions

When flying in gusty weather conditions the maximum permissible airspeed of 115 mph (100 kts) should not be exceeded for safety reasons. The REMOS G-3 /600 offers very stable flight characteristics even in heavy weather conditions, similar to that of a Cessna 172.

10 Supplementary Information

10.1 Flight Training Supplement

10.1.5 Stall

The REMOS G-3 /600 is fully controllable when flying at a wide range of airspeeds, however if the lower speed limits exceeded, the aircraft will display very stable stall characteristics. If the airspeed is reduced by the pilot gradually pulling back on the control stick, aerodynamic buffet will occur, indicating that the aircraft is approaching the stall speed. Should the aircraft then be allowed to stall, the aircraft will remain controllable and the maneuver will result in a gentle and stable descent. The aircraft can be stalled both with flaps extended or retracted.

Conducting a stall maneuver does not require a special skill, nevertheless, if not yet familiar with the aircraft we recommend to do this exercise only when accompanied by a experienced flight instructor for the first time.

10 Supplementary Information

10.1 Flight training supplement

10.1.6 Slip

The slip is a very stable flight condition and is also very easy to perform. This maneuver is used to increase aerodynamic drag to enable a high rate of descent.

Before establishing a slip you have to ensure that the airspeed is within the required limits, the maximum permissible indicated airspeed of 86 mph (75 kts) (V_A) should not be exceeded and if performing a slip with flaps extended, a maximum indicated airspeed of 75 mph (65 kts) (V_{FE}) must be maintained. You will achieve the maximum descent rate at an indicated airspeed of 63 mph (55 kts) with flaps extended fully.

Conducting a slip will not require special skills, nevertheless, if not yet familiar with the aircraft, we recommend to do this exercise only when accompanied by an experienced flight instructor for the first time.

10 Supplementary Information

10.1 Flight training supplement

10.1.7 Gliding

The aircraft can glide well with the engine in idle or switched off. Best glide ratios are achieved within an indicated airspeed of 63 to 75 mph (55 to 65 kts). These speeds will establish a glide ratio between 1:15 to 1:17 with the flaps retracted (0° position).

10.1.8 Descent

When descending from level flight it is important to watch engine temperatures. During descent, the temperatures will decrease, which could cause engine failures or carburetor icing to develop.

So it is strongly recommended not to exceed the lower limits of these temperatures.

10 Supplementary Information

10.1 Flight training supplement

10.1.9 Approach

Approach under normal conditions

Always land on the most suitable runway, consider the wind direction, size of the runway, obstacles on the approach etc. Avoid airspeeds above 75 mph (65 kts) or below 55mph (48 kts) when on final. Due to the excellent gliding performance of the G-3 /600, higher airspeeds would not be helpful during the flare and would extend landing

Approach under tailwind conditions

When making a final approach with a slight tailwinds present, the G3 does not require different approach or flare procedures to that when flown in calm or headwind conditions, you do however have to keep in mind, that the landing distances will increase.

10 Supplementary Information

10.1 Flight training supplement

10.1.9 Approach

Approach in crosswind conditions

Cross-winds will not have a big effect to the flight characteristics or the G-3 /600 as long as wind speed stays within the maximum permissible speed up to 17 mph (15 kts). Conducting a cross-wind landing does will not require special skills, nevertheless, if not yet familiar with the aircraft, we recommend to initially exercise crosswind landings only when accompanied by an experienced flight instructor until sufficient experience has been gained.

Approach in turbulent weather conditions

If turbulences are indicated or wind shifts are expected, we recommend to establish an airspeed of 65 mph (56 kts). This will give you a reserve airspeed to balance any unexpected deviations in altitude and heading. In more gusty conditions it may beneficial to stabilize the glide slope by keeping the flap setting to the 15° position. Increasing airspeed above 65 mph (56 kts) will not be helpful to stabilize the aircraft, so this should be avoided.

Approach in rain showers

Raindrops on the wing surfaces influence the aerodynamic characteristics of the airfoil, drag will increase while lift decreases. The REMOS G-3 airfoil used on the REMOS G-3 /600 features stable flight characteristics in rain conditions. So there are no special advisories for flights within rain, we recommend to operate the aircraft like in turbulent weather conditions (see "Approach at turbulent weather conditions).

10 Supplementary Information

10.1 Flight training supplement

10.1.9 Approach

Approach in the slip configuration

If a high descent rate is required on final, we recommend to conduct a slip manoeuvre. In no case, push the control stick forward, this will cause higher airspeeds and result in a missed approach!

Conducting an approach in the slip configuration will not require special skills, nevertheless, if not yet familiar with the aircraft we recommend to do this exercise only when accompanied by a experienced flight instructor for the first time.

10 Supplementary Information

10.1 Flight training supplement

10.1.10 Touch down

Touch down under normal conditions

Landing the REMOS G-3 /600 is much easier than landing many other aircraft. The aircraft has very good low speed characteristics and so is very controllable all the way through the landing phase. After a good approach has been conducted the REMOS G-3 /600 does not require much action to result with a perfect touch down.

It is important to establish a safe and stable airspeed during the approach. The approach should be made at speeds between 60-70 mph.

10 Supplementary Information

10.1 Flight training supplement

10.1.10 Touch down

Touch down in tailwind conditions

Touch down with tailwinds present, does not require different procedures to that of normal conditions. You have to keep in mind however, that landing distances will increase due to a higher ground speed.

Approach in crosswind conditions

Cross winds will not have a big effect to the landing characteristics or the G-3 /600 as long as wind speed stays within the maximum permissible speed up to 17 mph (15 kts).

10 Supplementary Information

10.2 Towing glider

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10 Supplementary Information

10.2 Towing glider

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10 Supplementary Information

10.2 Towing glider

1 General Information

1.1 Introduction

This aircraft shall be operated only with a valid license including a glider towing rating. An specific type rating on the REMOS G-3 /600 is required!

This supplement is to be used in addition to the REMOS G-3 /600 Pilot Operating Handbook only!

1.2 Certification

The REMOS G-3 /600 complies to the rules of the Light Sport Aircraft airworthiness standards and does not conform to standard category airworthiness requirements.

1.3 Quick reference

For the use as a glider towing aircraft, the REMOS G-3 /600 is equipped with the Tost E85 tow release clutch, connected to the fuselage tail by a specially developed mounting frame. To release the tow rope a release lever is located on the left hand side of the pilot seat (colored yellow). Additionally, a back view mirror has to be installed at the left wing strut, by the use of a specially developed mounting bracket. Glider towing operation is only permissible with a 100 hp Rotax 912 UL/S engine installed.

10 Supplementary Information

10.2 Towing glider

2 Airplane and Systems Descriptions

2.1 Cockpit

Inside the cabin of the REMOS G-3 /600 a tow release handle is installed. You will find that handle located at the left hand side of the pilot seat, colored yellow. If the handle is pulled out, the tow rope will be disengaged. The handle should provide a free play of 1/2 to 1 Inch.

10 Supplementary Information

10.2 Towing glider

3 Operating Limitations

3.1 Maximum permissible towing speed (V_T)

The airspeed during glider towing operations must not exceed the maximum permissible airspeed of the towed glider.

The minimum airspeed when towing a glider must not drop below $1.3 \times V_S$ of the towed glider.

3.2 Maximum weak link strength

- Tow ropes should be a length of at least 165 to 200 ft.
- A weak link of $Q_{nom} = 300$ daN has to be installed.

3.3 Maximum permissible all up weight of the glider to be towed

The maximum permissible all up weight of the glider to be towed shall not exceed 1400 lb. We recommend to maintaining 1300 lb as maximum weight of the glider to be towed, when operated with the standard fixed pitch propeller.

During glider towing operations the REMOS G-3 /600 must be operated only by one pilot (no passenger allowed, except for training/instruction). The total take off weight (towing aircraft + glider) must not exceed 2400 lb.

10 Supplementary Information

10.2 Towing glider

4 Weight and Balance Information

4.1 General

When the aircraft is used for glider towing the weight and balance calculations like in the standard configuration are valid also for towing operation. Concerning payload, there are some restrictions which have to be observed, see also chapter 3 within this supplement.

4.2 Required equipment

The following additional equipment is required for the use as glider towing aircraft:

1. Tost tow release clutch, type E 85
1. REMOS mounting frame for tow release clutch. Order No. 06-005-A
1. Release handle (colored yellow)
1. REMOS oil temperature regulation flap. Order No. 08-023
1. Back view mirror with strut mounting bracket. Order No. 06-005-G & 06-005-H

Glider towing is only permitted when the aircraft is equipped with the 100 hp Rotax engine 912 UL/S.

10 Supplementary Information

10.2 Towing glider

4 Weight and Balance Information

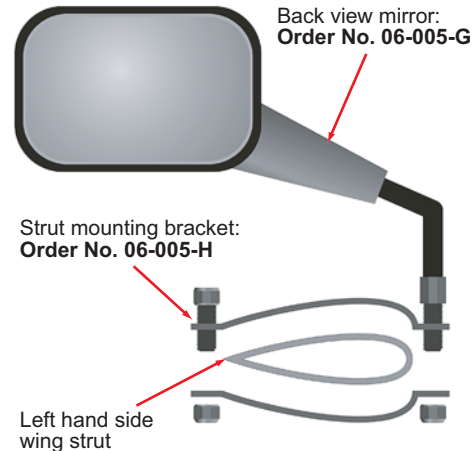
The following equipment is not part of the center of gravity calculation, but necessary for glider towing:

1. Towing rope with ring connector*
1. Weak link 300 daN (green)
1. Back view mirror

Attention:

The pilot has to ensure, that the required weak link is attached to the tow rope, otherwise the structure of the aircraft may get overloaded!

- * Tow ropes made of polyamide, polyester and polypropylene manufactured to aviation standards may be used, if the appropriate information is provided and durable quality is guaranteed. Rope connections should be protected by an appropriate cover to prevent wear. An appropriate weak link must be provided with the tow rope, to protect the towing aircraft against structural overload. The rope should not be expanded by more than +30% at maximum permissible workload.



10 Supplementary Information

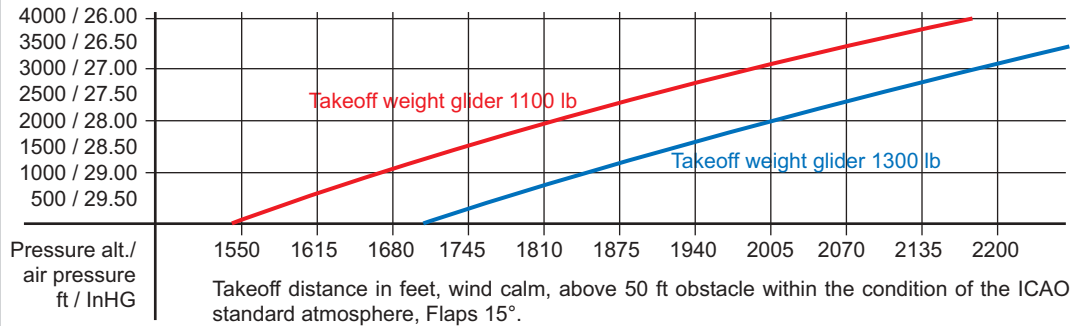
10.2 Towing glider

5 Performance

5.1 Takeoff distances

Aircraft Type	MTOW glider in lb	Minimum speed mph / kts	Speed for best climb kts	Takeoff distance ft	Press. alt./ air pressure ft / InHG
ASK 13	1120	57 / 50	58	1560	0 / 29.98
TWIN Astir	1270	69 / 60	66	1670	0 / 29.98
DG 1000	1320	72 / 63	69	1740	0 / 29.98

Takeoff distances effected by pressure altitude (field elevation)



10 Supplementary Information

10.2 Towing glider

5 Performance

5.2 Takeoff distance effected by external circumstances

Various circumstances will have an effect on the takeoff distance of the aircraft. The following listing gives you an estimation of the values:

- High grass + 15 to 20 %
- Dirty wings / rain drops + 10 to 15 %
- High air temperatures +5 to 10 %

- Nose wind component - 20 %
- Tail wind component + 15 to 20 %

5.3 Tested glider configuration

The following gliders have been tested and certified by the factory:

LS-4, Baby-III, Twin-III, Hornbach, Discus, Blanik, DG-500, ASK-21, DuoDiscus, MiniNimbus, Astir-CS, ASW-24E (motorglider).

10 Supplementary Information

10.2 Towing glider

6 Emergency Procedures

6.1 Engine failure

If an engine failure occurs during glider towing, the glider pilot must be informed immediately by radio to disengage the tow rope. Alternatively, the rope can be released at the towing aircraft. For further information, please refer to the chapter "Emergency Procedures" included in the REMOS G-3 /600 Pilot Operating Handbook.

6.2 Additional procedures

If an unallowable attitude of the glider is determined which could cause an uncontrolled flight situation, the tow rope has to be disengaged immediately. If the glider is located outside an angle of 60° behind the towing aircraft (Angle between tow rope and longitudinal axis of the towing aircraft > 30°), the rope has to be disengaged immediately!

6.3 Failure of the release clutch

If a failure on the release mechanism is determined, the final approach has to be carried out maintaining a high rate of descent. At touch down, the aircraft along with the rope should touch the ground at the same time.

10 Supplementary Information

10.2 Towing glider

7 Normal Procedures

7.1 Preflight check

Check tow release clutch to assure proper function and clean condition.

7.2 Takeoff

During takeoff, special care has to be taken that the climb rate and airspeed are adopted to the required values of the towed glider. Watch your rate of climb immediately after take-off (do not exceed the gliders climb capability)! To maintain permissible water- and oil temperatures during climb and descent, the aircraft must be equipped with an oil temperature regulation flap. During climb the operating lever of this flap should be in the "open/cooler" position.

7.3 Descent and landing

After disengaging the glider and prior to descent, it is recommended to close the oil temperature regulation flap (position "closed/warmer"). Special care has to be paid to keep all temperatures within the permissible range. If required to keep temperatures at proper operation levels, the throttle may be left at a setting just above the idle position. Before descent, it may be necessary to retract flaps to establish cruise configuration (flaps up, 0°), otherwise the maximum permissible descent speed of $V_{FE_{max}} = 75$ mph (65 knots) must not exceed! Before landing, the tow rope has to be released at a safe altitude (~ 150 ft AGL). Touch down with the tow rope still connected to the release clutch is not permissible!

10 Supplementary Information

10.2 Towing glider

8 Aircraft Ground Handling and Servicing

8.1 Servicing tow release clutch

During regular servicing intervals, the tow release clutch has to be cleaned, lubricated and checked to assure proper operation.

A general overhaul of the release clutch has to be conducted after 4 years / 4000 towing operations. For further information refer to the separate operators manual of the manufacturer.

10 Supplementary Information

10.2 Towing glider

9 Required Placards and Markings

9.1 Cockpit

Inside the cabin of the REMOS G-3 /600 the following placards are applied, when equipped for towing gliders.

At the left cockpit panel:



Near to the tow release handle:



9.2 Release clutch

Outside the aircraft the following placards are applied, when the aircraft is equipped for towing gliders.

Near to the release clutch:



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REMOS G-3 /600
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