

TST-14M

Bonus



Users of the TST-14M Bonus are mainly **pilots** who enjoy sport thermal flights and also appreciate independent take off, safe landings at airfields, easy handling of the plane on the ground and a quick assembly / disassembly. Bonus offers all of this at a low price with low operational costs.

Bonus is equipped with complete duplicate controls and avionics. This makes it suitable for clubs and flight schools that provide training on motorless and motorized gliders.

The **instrumentation** of the TST-14M Bonus glider is fully customizable - the customer can either choose instruments from our list of avionics manufacturers or he/she can supply the instrumentation himself/herself during the production of the ordered aircraft.

The Bonus can be delivered with an entire range of accessories and a **trailer**.



TST-14M Bonus is a two-seat motorized composite light self-launcher with a retractable power unit, suitable for thermal flying, wave or ridge flights and for clubs and flight schools. The aircraft also offers easy handling and the capability of independent take off.

TST-14M Bonus is designed mainly for leisure thermal flights. Its performance is comparable to common two-seat gliders. The plane is equipped with a retractable power unit enabling independent take off and reach of an airfield without any thermal support. Engine extraction and retraction is fully automatic and is controlled by electronic servo motors. The power unit is operated by the pilot using two buttons on the instrument panel. The ground handling of a Bonus is very easy thanks to its light weight. The wheels on the wing tips allow for independent taxiing and take off.



Brief Glider Characteristics

- * 17 meter wing span
- * Complete duplicate controls
- * Glide ratio 39
- * Long-life all-composite structure
- * Retractable Rotax 503 power unit
- * Independent taxiing and take-off; no off-airport landings and return transports
- * Ability to extract and retract the engine anytime during the flight
- * Up to 230 km range with the engine engaged
- * Aerotow capable
- * Easy assembly, disassembly and transport
- * Easy maintenance



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TECHNICAL DESCRIPTION

The TST-14M is a tandem two-seat, mid-winged monoplane with a cantilever wing, T-shaped tail and two-wheel tandem undercarriage. Its composite structure is made in negative molds.

THE WINGS with sandwich structure are equipped with ailerons and air brakes on the upper surface. There are no ribs in the wing. The strength of the wing is formed by the main spar, the aileron spar and the root rib. The wing profile of the sandwich structure forms a torsion box.

The wings are interconnected by fittings and two horizontal pins. The connection wing-fuselage is made by means of pins and fittings placed in the fuselage and the wing root rib. The composite ailerons are hung by four hinges with the turning axis on the upper side. Air brakes on the upper side of the wing are made of aluminium and are retracted into pits.

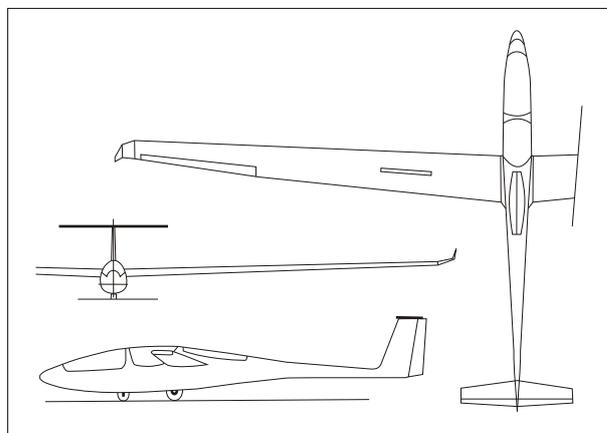
THE FUSELAGE with a shell structure is made in a negative mold together with the fin

THE TAIL is a T-shaped sandwich structure.

THE CONTROLS, enabling pitch, roll, air brake and trim control, are of lever design with a push-pull rod system. The relevant backstops are placed on the stick. Yaw control is transmitted via cables and includes adjustable foot pedals. The airplane can be trimmed by a torsional member in the elevator drive that is controlled by a lever in the left of the front cockpit.

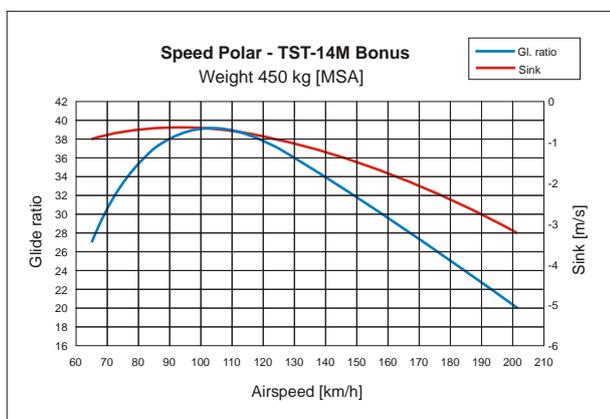
THE UNDERCARRIAGE consists of one unsprung wheel 350x100 mm and one fixed front wheel. The brake handle is on the left side of the floor. The wingtip wheels serve for independent taxiing and take-off. The castoring tail wheel 80x30 mm enables easy manipulation on ground.

THE POWER PLANT consists of a Rotax 503 engine, the 1:2 reducer and the 1200 mm diameter wooden propeller. The retraction mechanism of the power unit enables self-launching and restart during flight.



TECHNICAL PARAMETERS

Number of seats	2
Wing span	17 m
Wing area	12,01 m ²
Length	8,24 m
Aspect ratio	24
Weight of pilots and fuel	65 - 188 kg
MTOW with BRS	472 kg
V _{NE}	205 km/h
Max. maneuvering speed	150 km/h
Stall speed	65 km/h
Max. glide ratio with winglets	39
Min. sink rate	0,65 m/s / 85 km/h
Max. calculated load factor	+5,2 / -2,6
Engine	Rotax 503
Power	34 kW (46 HP)
Carburetor	2x membrane
Propeller	1200 mm
Reducer	1:2
Fuel tank capacity	20 liters
Fuel cons. when climbing	11 liters / h
Fuel cons. at cruising speed	9 liters / h



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