# About the WT9 Dynamic

**The two-seat DYNAMIC WT9 in CLUB or SPEED design is a top-of-the-range modern light aircraft with outstanding aerodynamics.** The use of fiber composite materials in GFK / CFK sandwich construction creates a low cell weight but with a high strength value. The airframe geometry including rudder design and the center of gravity, give this elegant aircraft an excellent performance and yet stable and good-natured flight characteristics. Both versions (CLUB and SPEED) have an integrated total rescue system as standard.

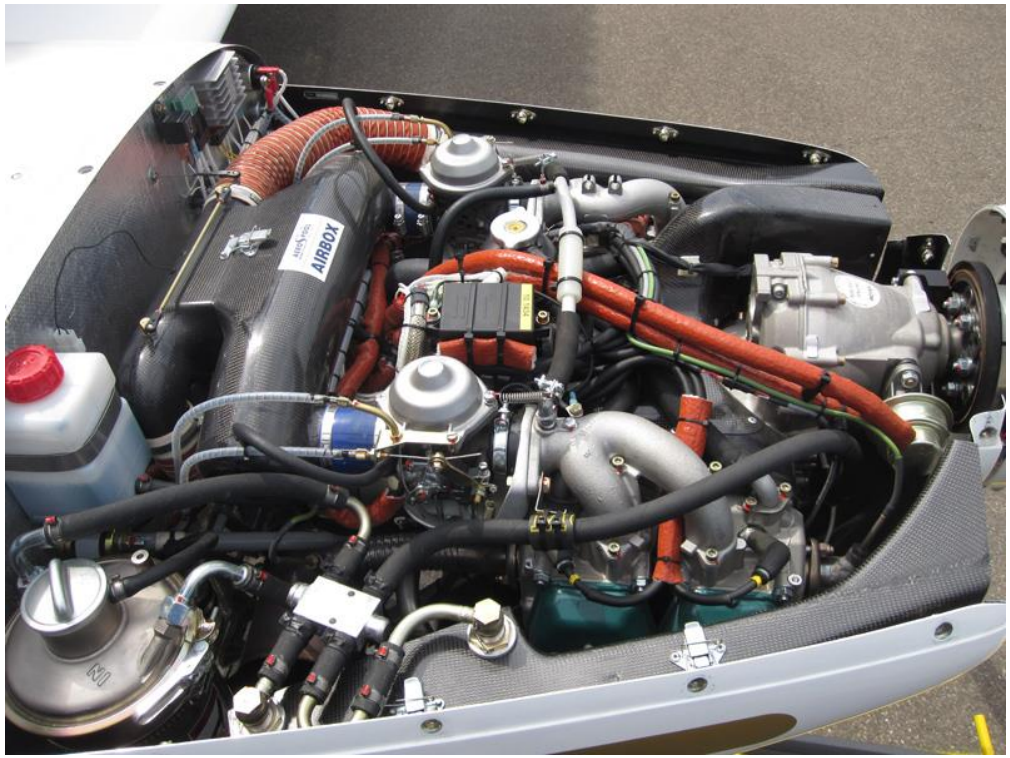
The cruising speed of the DYNAMIC WT9 depends on the respective engine and equipment (power at approx. 75%) the speed ranges from approx. 120 ktas to approx. 167 ktas. The take-off roll is very short at 142m while a short field landing can achieve 123m.

The DYNAMIC WT 9 (CLUB and SPEED versions) are suitable for glider and banner towing. The maximum tow load is 850 kg when towing gliders or banner sizes up to 200 m2. These are all factory approved and have been tested. The WT9 is a true all-round plane, which has a wide range of aviation uses.

Whether in the CLUB or in the SPEED version - the MTOW of 600 kg makes the DYNAMIC capable of carrying a large load. Empty weights can range between 290 – 390kg depending on the chosen set up and equipment.


**Aerospool's experience in the construction of more than 850 WT9 series aircraft guarantees high quality manufacturing down to the last detail.**

**The engine –** Customers choose between the ROTAX 912 ULS (100 hp), ROTAX 912 iS (100 hp) and the turbo-charged ROTAX 914 (115 hp) and 915 (141hp). These are 4-stroke four-cylinder boxer engines with liquid / air cooling, 2,000 h TBO, maintenance-free electronic dual ignition, large electric starter and internal generator. Propellers made by WOODCOMP ensure power is converted to thrust efficiently.



**The cockpit -** The high-quality Plexiglas cockpit canopy is available in various tints (brown or blue) and opens forward with the support of gas springs. When rolling on the ground, the hood can be opened up to speeds of about 30 km / h and provides fresh air in the warmer seasons. The entry is easy from the rear over the wings. The lightweight, ergonomically designed seating position allows for low air resistance of the fuselage and good visibility. The comfortable cabin width of 115 cm is larger than many 4 to 6 seater GA aircraft. All seating cushions are removable and there is a generously sized luggage compartment, (90 liters to be exact!) behind the seats which is accessible in flight. Fresh air openings and two additional adjustable fresh air nozzles in the hood frame as well as fresh air inflow in the footwell provide pleasant ventilation. These are aerodynamically designed NACA inlets to ensure continued comfort in the cabin whilst minimising drag. There is also warm air available from the heater which flows through openings in the footwell.

**Safety-** The overall rescue system MAGNUM 601 Lightspeed offers the crew the greatest possible safety - even in extreme situations. There is an ACI-overdraw warning system including stick-shaker (stall-speed warning) on both control sticks as well as stall-strips on the wings. Additionally an optional TRX 1500 anti-collision system warns visually and acoustically against nearby aircraft.

**The construction -** The cell is manufactured in precisely milled negative molds with the aid of the suction process and then tempered at a temperature of 55 ° C. Carbon, aramid and glass fibers are used as materials for the cover layers. Hard foam forms the core. Only aviation-approved resin systems are used for processing the high-quality fibers.

From the 2019 model onwards it is optionally possible to carry out the entire exterior painting of the aircraft (standard white) in an alternative colour tone. Complex designs can also be added with heat shrink wrapping. The fuselage consists of two vertically divided half-shells, which are stiffened and glued with ribs and internals. The control and fittings are made of inert gas-welded chrome-molybdenum steel tube. The wings consist of the upper and the lower shell half and can take high torsional loads. The main spar is constructed from a foam core with carbon fiber straps which takes the bending load.


**The control is via push rods or cables.** The elevator is controlled by push/pull rods in the fuselage. The manual trim acts by means of a spring on the control rod and adjusts the neutral position of the elevator. The aileron control is attached physically to the joystick via rod ends and push rods to reversing levers in the wings and then onto the control horn. The nose wheel and rudder are controlled by the adjustable pedals and allow for easy handling. The rudder is linked via cable and is the only control surface not operated by push/pull rods. The flaps are operated by a gate-guided lever on the center console. The electrical operation of the trim and flaps are optional.

**The DYNAMIC WT9 is available as a fixed or retractable undercarriage aircraft.** Both variants are equipped with a main wheel tire size 14 x 4 and nose wheel tires 13 x 5 to support a max. take-off weight of 600 kg (as designed). On request (included as standard with DYNAMIC WT 9-CLUB) are a high-quality brake system. These are made by the BERINGER company which service motorcycles and other vehicles. The hydraulic brakes are actuated by means of a brake lever on the center console – which can also be locked as a parking brake.

**The retractable undercarriage** reduces air resistance and enables higher flying speeds. The retractable landing gear is made of Cr-Mo steel tube and has PU damper elements with sufficient travel - even for poor slope conditions. The large track width of the main landing gear provides track-stable handling in all areas. When driving in and out, an electrically driven hydraulic pump actuates double-acting cylinders. In case of failure of the hydraulics or the power supply, the suspension cylinders are de-pressurized and extended by gas springs and by gravity and locked (fail-safe requirement). A safety device prevents the landing gear from being retracted unintentionally on the ground or at speeds below 90 km / h.

**The fuel system** with integral tanks in the wings holds approx. 75 litres with the option for 100 litres or 125 litres. The tanks are located outside the cabin in the wing stubs or in the wings themselves, depending on the tank volume. Ranges are between approx. 800 km and 1,600 km.

**Aircraft towing + banner towing-** The low weight and perfect aerodynamics result in towing capacities, which are equal or superior to conventional GA tow aircraft that are driven by 180 HP engines. The benefits are obvious as there is a 50% reduction in fuel costs and a significantly lower purchase price when compared to larger GA aircraft.

An electrically / hydraulically adjustable three-blade propeller (Constant Speed) optimally implements the performance of the ROTAX 914 UL / or the ROTAX 915 engine in towing mode. The towing version of the DYNAMIC WT9 CLUB is also available with the ROTAX 912 ULS engine and an electric adjustable three-blade propeller (Constant Speed).

The max. permissible towing load is up to 850 kg! The banner size can be up to 200m ² surface area with a max. 20 kg weight allowed. Optionally, for the DYNAMIC WT 9, currently the only tow plane of this class, an electrical cable retraction device (TOST system) is available.

The DYNAMIC WT 9 has proven itself in numerous operations as a tow aircraft in club operations and at competitions. It has performed excellently in this field of application throughout Europe and other parts of the world.