

DynAero MCR-01 Sportster Model Guide

The DynAero MCR-01 Sportster is a two-seat, low-wing kit aircraft with a carbon structure. The flight manual covered here describes the 100 HP Rotax 912 S version. It flies under a restricted airworthiness certificate, VFR day only, and may not be used for hire or reward. Buyers should confirm the mandatory flap-system bulletin was done and check the propeller bolt tightening history.

KEY TAKEAWAYS

- Two seats, 490 kg maximum take-off weight, 80 l fuel (79 l usable), and a 15 kg luggage limit.
- Restricted-category kit aircraft: VFR day only, no icing, no aerobatics, no spins, no hire or reward use.
- Flap control retrofit BS 12 F 0043 was made mandatory by an AD and applies to all serial numbers. Confirm it was done.
- Rotax 912 S gives 100 HP for take-off and 92 HP continuous. Several fixed and variable-pitch propellers are approved.

LIMITS AND LOADING

Never-exceed speed is 173 kts, maximum structural cruising speed 143 kts, manoeuvring speed 127 kts, and the flaps-extended limit 92 kts. Weight limits are 490 kg at take-off and at landing, and 432 kg without fuel. The CG range is 15 to 45% of the 800 mm mean aerodynamic chord. Manoeuvring load factor is +3.8 / -1.5 g.

ENGINE AND PROPELLER

The Rotax 912 S is limited to 5800 RPM at take-off and 5500 RPM continuous. Do not run continuously above 5500 rpm for more than 5 minutes. The manual gives different cylinder head figures in different tables (135 °C maximum in one, a 150 °C red line in another), so check them against your instruments. Tighten propeller bolts before first flight, after 1 and 5 flight hours, then every 50 hours and after any ground period over 1 month.

MAINTENANCE AND WHAT TO CHECK

The maintenance manual (edition 25/09/19) sets 50H, 100H/annual, 1000H and 5-year inspections. SE Aviation allows no lightening or shortening of the programme. Service bulletin BS 12 F 0043 requires a reinforced flap control, electric end-stop switches and dust seals, with compliance by 01/01/2013. It also calls for a wear check of the frame 5 lead-screw bushings.

SPECIFICATIONS

Engine Takeoff Power Hp	100
Engine Continuous Power Hp	92
Wing Span M	6.63
Wing Area M2	5.2
Length M	5.48
Height M	1.43
Fuel Capacity L	80
Usable Fuel L	79

V-SPEEDS

Vne Kts	173
Vno Kts	143
Va Kts	127
Vfe Kts	92
White Arc Start Kts	50
Green Arc Start Kts	65

WEIGHT & BALANCE

Max Takeoff Weight Kg	490
Max Landing Weight Kg	490
Max Weight Without Fuel Kg	432
Cg Forward Limit Percent Mac	15
Cg Aft Limit Percent Mac	45
Mac Mm	800
Max Luggage Kg	15
Max Instrument Panel Weight Kg	15

SAFETY NOTES

- Spins and aerobatics are prohibited. Operation is VFR day only, in conditions without icing.
- Do not switch off the main switch before the engine is stopped.
- After any flap work, check the electric stops: the front one stops 1 mm before the mechanical stop, the rear one at 25° (+/-1°) flap deflection.