

ASH 25 E Flight Manual

2.4 Power-Plant

Engine Manufacturer: Bombardier-Rotax GmbH
Engine Model: Rotax Type 275
Max.take-off power: 17.6 KW/24 hp 7000 rpm
Max.continuous power: 17.6 KW/24 hp 7000 rpm
Max. take-off revs: 7000 rpm
Max. continuous revs: 7000 rpm
Max. short-time revs: 7200 rpm

Max. cylinder head temp.: 250 °C (480 °F)
Lubricant: fuel/oil mixture lubrication at ratio
1:50 with Super 2-stroke oil
Transmission: Gear wheel transmission with 1 : 3 re-
duction ratio.

The installation of the following propellers from the manufacturer mt-Propeller has been type-approved:

MT 130 L 95 - 1B
MT 130 L108 - 1B.

2.5 Power-Plant Instrument Markings

The following table shows the markings of the engine instruments and the meaning of the colours employed.

1. Conventional VDO analogue display instruments:

Instrument	Red Line: minimum limit	Green Arc: normal operating	Yellow Arc: caution range	Red Line: maximum limit
Tachometer RPM	---	3000-7000	7000-7200	7200
Cyl. Head Temp. Gauge	---	---	---	250 °C (480 °F)

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Fuel Gauge unusable*			

* Also valid if an ILEC TAZ-25 display instrument is installed.

2. Digital ILEC TAZ-25 (power-plant display instrument)

Permanent Display:

Tachometer (4 digits) [rpm]	Green Diode Normal Operating 0 to 7000	Yellow Diode Caution Range 7000 to 7200	Red Diode Max.Limit blinking at 7200 plus
Fuel quantity (three digits)	0/0,1/4,2/4,3/4 and 4/4		

Optional Display, pressing the right Button:

Engine Battery Voltage (4 digits)	XX,X [Volts]
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CAUTION:

If the usable fuel quantity in the fuselage tank gets down to 1.5 l, the ILEC unit produces a shrill acoustic alarm. By pushing the left button the alarm tone is "extinguished" but is activated again after two minutes.

2.6 Masses (Weights)

Max. Take-Off Mass:

-with water ballast 750 kg (1654 lb)

-without water ballast but with fuel in the wing tank 735 kg (1620 lb)

Max. Landing Mass: 750 kg (1654 lb)

Max. mass of all non-lifting parts 425 kg (937 lb)

Max. mass in baggage compartment: 15 kg (33 lb)

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Fuselage

Length	9.00 m	(29.5 ft)
Height at T-tail with tail wheel	1.70 m	(5.5 ft)
Cockpit width	0.705 m	(2.3 ft)
Cockpit height	0.980 m	(3.2 ft)

Fin

Height over tail boom top edge	1.38 m ₂	(4.5 ft)
Surface area	1.705m ²	(18.35 sqft)
Airfoil Section FX 71-L-150/30 with 12 % thickness.		

Rudder

Chord ratio	31 %	
Surface area	0.512 m ²	(5.51 sqft)

Tailplane

Span	3.125m ₂	(10.25 ft)
Surface area	1.27 m ²	(13.67 sqft)
Aspect ratio	7.69	
Airfoil Section	Wortmann FX 71-L150/30 with 12 % thickness	

Elevator

Chord ratio	30 %	
Surface area	0.381 m ²	(4.10 sqft)

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Airbrake Paddles (Schempp-Hirth - top sfce.only)

Length	1.20 m	(3.94 ft)
Surface area (both together)	0.336m ²	(3.62 sqft)
Height	0.15 m	(0.49 ft)

Power-plant

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Engine:	Rotax Type 275
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Continuous Power:	17.6 kW/24 hp 7000 rpm
Max. Take-Off Revs:	7000 rpm
Max. Continuous Revs:	7000 rpm
Max. Revs, short-term:	7200 rpm
Max. Cylinder Head Temp:	250 °C
Lubricant:	Mixture lubrication. Use clean burning oil with minimum residue, as provided by synthetic oils.
Mixture Ratio:	1:50 with 2-stroke oil (TSC 3)
Transmission:	Geared transmission of 1:3 reduction
Gear Lubricant:	SAE 140, API GL 5, approx.330 ccm The following gear oil complying with above specification should be used: Mobil Gear SHC 460
Propeller Manufacturer:	MT Propeller
Designation:	MT 130 L 95 - 1 B or MT 130 L 108 - 1 B