

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

H81EU
EHI EH101-500
November 25, 1994

**TYPE CERTIFICATE DATA SHEET No. H81EU**

This data sheet which is part of Type Certificate No. H81EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder. E.H. INDUSTRIES LTD.  
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London W45RG, England

Company jointly owned by:

AGUSTA ELI s.r.l.  
21017 - Cascina Costa di Samarate (Varese)  
Italia  
and  
WESTLAND HELICOPTER LIMITED  
Yeovil, Somerset, England

I. Model EH101-500 (Transport Category Helicopter) approved November 25, 1994.

Engines. Three General Electric model CT7-6 turboshaft engines with DECU.  
(Ref. CID 618776 and CID 618775).  
One auxiliary power unit Sunstrand model T-62T40C7EH/  
P/N 4502316 with ESU P/N 4502145.

Fuel. Jet A - ASTM D1655  
Jet A1 - ASTM D1655  
Jet B - ASTM D1655

Fuel system icing inhibitor is to be used below + 5°C OAT. See RAI approved Rotorcraft Flight Manual.

Powerplant Limitations.

All engine operation

**- Maximum Continuous**

Torque (transmission rating)	100%	(1254 lb.ft)	(4884 shp at 100% rpm; 5006 shp at 102.5% rpm)
Output shaft speed (Nf)	102.5%	(20974 rpm)	
Gas Producer Speed (Ng)	101.6%	(45415 rpm)	
Gas Temperature	899 °C	(1650 °F)	

**- Take Off (5 minutes)**

Torque (Transmission rating)	106.5%	(1335 lb.ft)	(5199 shp at 100% rpm; 5329 shp at 102.5% rpm)
Output shaft speed (Nf)	102.5%	(20974 rpm)	
Gas Producer Speed (Ng)	102.6%	(45862 rpm)	
Gas Temperature	948 °C	(1738 °F)	

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Powerplant Limitations (cont'd)

## One Engine Inoperative (Emergency)

**- Maximum Continuous**

Torque (transmission rating)	112 %	(934 lb. ft)	(3640 shp at 100% rpm; 3731 shp at 102.5% rpm)
Output shaft speed (Nf)	102.5%	(20974 rpm)	
Gas Producer Speed (Ng)	102.6%	(45862 rpm)	
Gas Temperature	948 °C	(1738 °F)	

**- 2.5 Minutes Rating**

Torque (transmission rating)	118%	(986 lb.ft)	(3840 shp at 100% rpm; 3936 shp at 102.5% rpm)
Output shaft speed (Nf)	102,5%	(20974 rpm)	
Gas Producer Speed (Ng)	103%	(46041 rpm)	
Gas Temperature	964 °C	(1767 °F)	

Rotor Limits.

Power off			
Maximum	110%	(231 rpm)	
Minimum	95%	(199.5 rpm)	

Power on-Take Off and Landing			
Maximum	103%	(216.3 rpm)	
Minimum	98%	(205.8 rpm)	

Power on-Cruise			
Maximum	101%	(212.1 rpm)	
Minimum	98%	(205.8 rpm)	

**- Rotor Speed Warning**

Low speed p. on	96%	(201.6 rpm)	
High speed p. on	105%	(220.5 rpm)	
Low speed p. off	95%	(199.5 rpm)	
High speed p. off	110%	(231 rpm)	

Airspeed Limits.

Never exceed speed (Vne) 167 Kts IAS

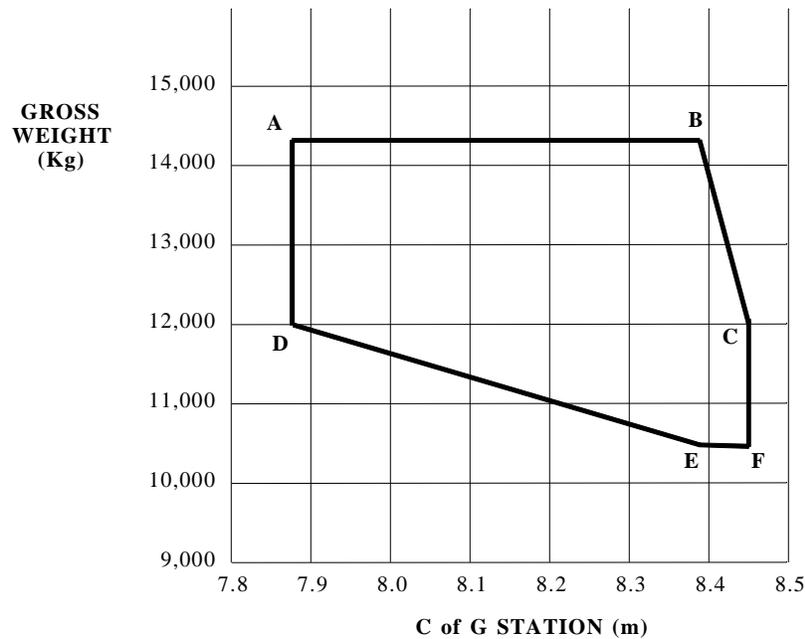
For reduction of Vne with altitude  
OAT and weight, see RAI  
approved Rotorcraft Flight Manual.

Maximum Gear Operating Speed (Vlo) 167 Kts IAS  
Maximum Gear Extended Speed (Vle) 167 kts IAS

Never Exceed Speed Power Off  
(Vne power off) 134 Kts IAS

Center of Gravity (CG) Range.

## Longitudinal limits



kg	m	kg	m
A 14290	- 7.875	D 12000	- 7.875
B 14290	- 8.385	E 10500	- 8.385
C 12000	- 8.460	F 10500	- 8.460

Lateral center of gravity limits are  $\pm 30$  mm from the center line at all gross weights.

Empty Weight CG Range.

From sta 8385 mm (330.12 in) to sta 8460 mm (333.07 in.)

Datum.

Longitudinal station 0 (datum) is 3385 mm (133.26 in) forward of the front jack point.

Lateral station 0 (datum) is  $\pm 1400$  mm (55.12 in) inboard of each main jack point and coincides with the rotorcraft longitudinal plane of symmetry.

Leveling Means.

Plumb line from ceiling reference point to index plate on floor of passenger cabin.

Maximum Weight.

14290 kg (31504 lb)

Minimum Crew.

Two (2) pilots.

Number of Passengers Seats.

Thirty (30) passengers.

Maximum Baggage.

Not applicable.

Fuel Capacity.

Total: 1118.88 U.S. Gal. (4235 lt) in 4 tanks of 279.72 U.S. Gal. (1058.75 lt) each at sta. 5375; 6375; 7375; 8375 mm respectively (211.6; 250.98; 290.35; 329.72 in)

Usable: 1097.75 U.S. Gal. (4155 lt)  
See Note 1 for unusable fuel.

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<u>Oil Capacity.</u>	<p><u>Engines</u> 1.63 U.S. Gal. (6.2 lt) each engine, two at sta. 8404 mm (330.86 in) and one at sta. 9702 mm (381.96 in.)</p> <p><u>APU</u> 0.79 U.S. Gal. (3 lt) at sta. 10045 mm (395.4 in)</p> <p><u>Main Gearbox</u> 13.2 U.S. Gal. (50 lt) at sta. 8140 mm (320.47 in)</p> <p><u>Accessory Gearbox</u> 1.82 U.S. Gal. (6.9 lt) at sta. 6778 mm (266.8 in)</p> <p><u>Intermediate Gearbox</u> 0.76 U.S. Gal. (2.9 lt) at sta. 18712 mm (736.6 in)</p> <p><u>Tail Gearbox</u> 0.92 U.S. Gal. (3.5 lt) at sta. 19395 mm (763.5 in)</p> <p>See Note 1 for undrainable oil.</p>
<u>Maximum Operating Altitude.</u>	3048 m (10,000 ft)
<u>Rotor Blade and Control Movements.</u>	For rigging information refer to the EH101 Maintenance Manual Document # EC02P002J.
<u>Serial Numbers Eligible.</u>	50007, 50009
<u>Import Requirements.</u>	<p>To be considered eligible for operation in the United States, each aircraft manufactured under this Type Certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting civil airworthiness authority which states (in the English language): "This aircraft conforms to its U.S. type design (Type Certificate Number H81EU) and is in a condition for safe operation. The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 and exported by the country of manufacture is FAR Sections 21.183(c) or 21.185(c).</p> <p>The U.S. airworthiness certification basis for aircraft type certificated under FAR Section 21.29 exported from countries other than the country of manufacture (e.g. third party country) is FAR Sections 21.183(d) or 21.183(b).</p> <p>Certificates of Airworthiness under this Type Certificate may not be granted unless approved passenger seating featuring upper torso restraint is installed.</p> <p><u>Note:</u> The Maintenance Manual for the EH101-300 has not been accepted by the FAA, therefore this aircraft is not eligible for issuance of a standard certificate of airworthiness. For further information contact AEU-100 FAA/EMB, PSC 82 Box 002, APO AE 09724 or FTW-AEG, DOT/FAA, Fort Worth, TX 76193-0270.</p>
<u>Certification Basis.</u>	<p>FAR 21 including Amendment 21-61.</p> <p>FAR 29 including Amendment 29-1 through 29-27.</p> <p>FAR 29.351 Amendment 29-30. Equivalent Safety Findings for FAR 29.903(b) and FAR 29.1303(g)(2)</p> <p>Special condition no. 29-ASW-12 on HIRF.</p> <p>FAR 36 including Amendment 36-14.</p>
<u>Equipment.</u>	The basic required equipment as prescribed in the applicable airworthiness regulations (see certification basis) must be installed in the aircraft for certification. In addition a RAI approved Rotorcraft Flight Manual is required.

NOTES.

Note 1. Current weight and balance report including list of equipment included in certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding CG location must include total oil capacity of 22.43 U.S. Gal. (84.9 lt) at sta. 9074 mm (357.24 in) and unusable fuel of 21.03 U.S. Gal. (79.6 lt) at sta. 7259 mm (285.8 in).

Note 2. Placards listed in the RAI approved Helicopter Flight Manual must be displayed in the appropriate location.

Note 3. Instructions for continued airworthiness of the rotorcraft are provided in the following documentation:

- Document No. ED02P211JTC Continued Airworthiness Schedule and Airworthiness Limitations Manual.
- Document No. EC02P002J Maintenance Manual.

which must be supplied with each rotorcraft at time of delivery. Service bulletins, structural repair manuals, overhaul and maintenance manuals which contain a statement that the document is RAI approved, are accepted by the FAA and are considered FAA approved. These acceptances pertain to the type design only.

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