

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

1H17 Revision 6 TWMCC Leasing, LLC (Air & Space) 18A September 10, 2013
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TYPE CERTIFICATE DATA SHEET NO. 1H17

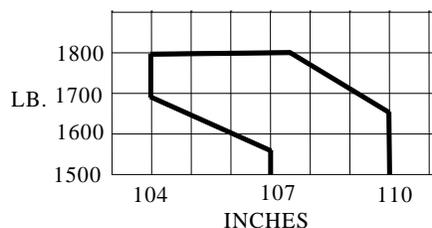
This data sheet which is part of type certificate No. 1H17 prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder	TWMCC Leasing, LLC 3101 Airman's Drive Ft. Pierce, Florida 34946
Type Certificate Holder Record	<p>Umbaugh Aircraft Corporation, Bartow, Florida was original type certificate (TC) holder for Model 18 approved on September 12, 1961, and the Model 18A approved on May 4, 1965. The Model 18 was later removed from the TC because no production model 18's were built.</p> <p>Umbaugh Aircraft Corporation transferred TC 1H17 to Air & Space Manufacturing, Inc. on June 2, 1967.</p> <p>Air & Space Manufacturing, Inc. transferred TC 1H17 to Air & Space America, Inc. on March 17, 1990.</p> <p>Air & Space America, Inc. transferred TC 1H17 to Farrington Aircraft Corporation on July 18, 2011.</p> <p>Farrington Aircraft Corporation transferred TC 1H17 to Heliplane Aircraft Corporation International on July 21, 2011.</p> <p>Heliplane Aircraft Corporation International transferred TC 1H17 to TWMCC Leasing, LLC on December 12, 2012.</p>

I - Model 18A, 2 PCL Gyroplane, Approved May 4, 1965

Engine	Lycoming 0-360-A1D (carburetor setting No. 10-3878)
Fuel	100 minimum grade aviation gasoline
Engine limits	For all operations, 2700 r.p.m. (180 hp.)
Propeller and propeller limits	<p>(a) Hartzell HC-92ZK-8L/L8447A-8 Pitch settings at 30 in. sta.: low 11°, high 28° Diameter: not over 76 in., not under 74.5 in.</p> <p>(b) Hartzell Governor F-2</p>
Rotor limits	Maximum 370 r.p.m.
Airspeed limits	<p>Never exceed 84 m.p.h. (CAS) at 1600 lb.</p> <p>Never exceed 97 m.p.h. (CAS) at 1800 lb.</p>
C.G. range	<p>(+104.0) to (+107.5) at 1800 lb.</p> <p>(+104.0) to (+109.2) at 1700 lb.</p> <p>(+105.0) to (+110.0) at 1650 lb.</p> <p>(+107.0) to (+110.0) at 1550 lb. or less</p> <p>Straight line variation between points given</p>

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Empty weight C.G. range	None
Maximum weight	1800 lb.
No. of seats	2 (1 at +52, 1 at +83)
Maximum baggage	100 lb. (+113)
Fuel capacity	28 gal. (+110)
Oil capacity	8 qt. (+142) See NOTE 1 for data on system fuel and oil.
Rotor blade and control movements	For rigging information refer to Maintenance Manual.
Serial Nos. eligible	18-6 and up
Datum	109.0 inches forward of rotor centroid
Leveling Means	Door sill
Certification basis	Part 6 of the Civil Air Regulations effective December 20, 1956 as amended by 6-1 thru 6-4; design conditions in FAA letter of July 6, 1960 to Umbaugh Aircraft amended June 15, 1965; flight conditions in Umbaugh Aircraft Report UER 18-219 of July 12, 1961, and the following exemptions: No. 177 from compliance with CAR 6.604(f) concerning installation of oil temperature warning device in main rotor gear box. No. 183 from compliance with CAR 6.112 (a) as to angle of climb requirements. Type Certificate No. 1H17 issued September 12, 1961. Application for Type Certificate dated March 9, 1961.
Production basis	None. Prior to original certification of each gyroplane, an FAA representative must perform a detailed inspection of workmanship, materials, conformity to approved technical data and a check of flight characteristics.
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification basis) must be installed in the aircraft for certification. In addition an FAA Approved Gyroplane Flight Manual dated May 4, 1965, or later FAA approved revision, is required.
NOTE 1.	Current weight and balance report together with list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each gyroplane at time of original certification. The certificated empty weight and corresponding C.G. locations must include unusable fuel and oil of 8 lb.
NOTE 2.	The following placard must be displayed in front of an in clear view of the pilots: "This gyroplane must be operated in compliance with the operating limitations specified in the FAA Approved Gyroplane Flight Manual."
NOTE 3.	Information essential to the proper maintenance of the gyroplane is contained in the manufacturer's Maintenance Manual provided with each gyroplane. In addition, Transmission Gears, Part Numbers DS-U18-3015-1 and DS-U18-3015-2 must be visually and magnetic particle inspected every 500 hours.

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