



**BEAGLE**  
**MILES-WALLIS**  
**AUTOGYRO**

# BEAGLE

## MILES-WALLIS AUTOGYRO

Designed by Wing Commander K. H. Wallis, R.A.F., one of the foremost experts in the autogyro field, the BEAGLE-Miles-Wallis autogyro is the culmination of many year's research and experiment. Incorporating many new ideas, it has been developed as a sturdy, simple-to-fly, easy-to-maintain and inexpensive method of air transport.

Aerial dispatch service, A.O.P., photography, light cable laying, agricultural use, fishing and whaling observation, surveys, road traffic control and the inspection of power lines, boundary fences and pipe lines — all these are among the many military and civil applications within the scope of the BEAGLE W.A. 116 autogyro.

Ultra-light in construction — an empty weight of 250 lb. is envisaged — a light streamlined cockpit can be fitted. The aircraft may be towed along the ground, or used as a ground vehicle, and when employed in either of these roles the rotor blades are secured fore and aft by attachments, which can be carried beneath the fuselage in flight. The modest dimensions allow the W.A. 116 to be easily stored and the main wheels may be folded upwards to facilitate storage still further.

With the prototype present tankage of 6 gallons the aircraft has a range of close on 100 miles, or approximately 1½ hours flight. Aircraft subsequent to prototype will be provided with increased tankage. With a well engineered spin-up device enabling take-offs to be made

from confined areas, controls are similar to those of a light conventional fixed-wing aircraft, with the addition of a rotor engagement lever and rotor brake. Main wheel brakes are fitted, capable of holding the full engine thrust, allowing optimum use to be made of the rotor spin-up capability.

Special attention has been paid to the rotor blades and head. The blades, designed for an unlimited fatigue life, are constructed of laminated bonded steel, and wood, covered with fabric.

Particular care has been paid to avoid trim changes which can cause tracking errors with change of climate.

The rotor head has been designed specifically to give a light and simple spin-up drive. It incorporates many novel features in respect of drive, stability and control, and rotor vibration is at quite an unusually low level. Loads resulting from power changes can be controlled without the use of the trimming systems and an important feature is the stability of the aircraft during changes of pitch. The suspension system tends to stabilise "g" loads giving the pilot "feel" of the loads he is imposing.

The W.A. 116 is a fundamentally new design and represents a substantial advance in light autogyros, and its versatile character makes it an important addition to British Aviation.



## Particulars and Performance

Weight empty - - - - -	200 lb.
Rotor Diameter - - - - -	20 ft. 2 in.
Length - - - - -	9 ft. 6 in.
Height - - - - -	6 ft. 1 in.
Wheelbase - - - - -	3 ft. 6 in.
Track - - - - -	5 ft.
Overall Width (wheels folded) - - -	3 ft.
Minimum Cruising Speed (estimate) -	35 knots
Maximum speed (estimate) - -	100 knots
Maximum range (estimate) -	100 nautical miles
Rate of climb - - - - -	1200 ft. min.
Power plant - - - - -	70 h.p. air-cooled
Minimum Flight Speed (estimate)	
'0' miles per hour (descending)	
Minimum Landing Speed (estimate) -	7 knots
Minimum Level Flight Speed (estimate)	12 knots

**Its BEAGLE. Its BRITISH.**

*All descriptions and illustrations and also specifications and particulars relating thereto, are subject to variation/modification and shall not be deemed to form a part of any contract.*





One of the many uses of the BEAGLE W.A. 116 autogyro is that of aerial photography. It will hover while the pilot is operating a camera, and this characteristic together with the aircraft's easy manoeuvrability, is a principal feature.



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