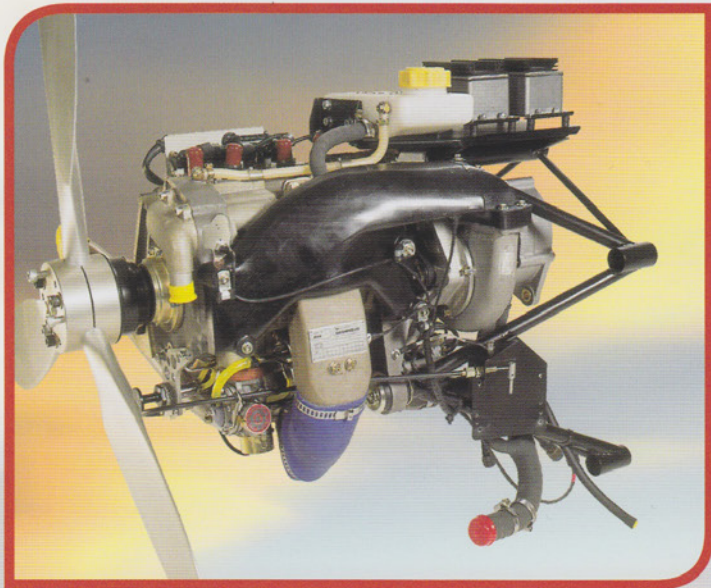




UAV
ENGINES

AR682 - 75 BHP ROTARY ENGINE FOR UAVs



The AR682 engine has been developed to power UAVs which have limitations on propeller diameter and thereby cannot use a reduction drive. It provides 75 BHP at 6000 rpm in an ultra-compact envelope. In 1994 this power unit with all accessories successfully completed a customer-witnessed 150 hour FAR 33-type endurance test.

DESIGN FEATURES

- Exceptionally high power to weight ratio.
- Low Cross Sectional Area.
- Economical fuel consumption
- Low levels of vibration

TECHNICAL SPECIFICATION

Engine Type:	Twin rotor Wankel-type rotary engine.
Capacity:	294 CC per rotor.
Power Output:	75 BHP nominal at 6000 engine rpm.
Weight:	51kg for full wet running installed assembly. As illustrated including 2 kW generator, throttle actuator, fuel pump and pressure regulator etc. Propeller not included.
Direction of Rotation:	Anti-clockwise (looking at prop flange).
Ignition System:	Full duplicated 28V C.D. system with magnetic triggering firing twin spark plugs. R.F. shielded.
Fuel Type:	AVGAS (100LL) or Regular grade (min 92 RON) Mogas automotive (leaded or unleaded).
Specific Fuel Consumption:	Typically 0.52 to 0.55lb/bhp/hr. (See overleaf for details).
Reduction Drive Option:	See AR682R data sheet.

NOTE

Certain design features of the engine are covered by British, U.S. and other foreign patents.

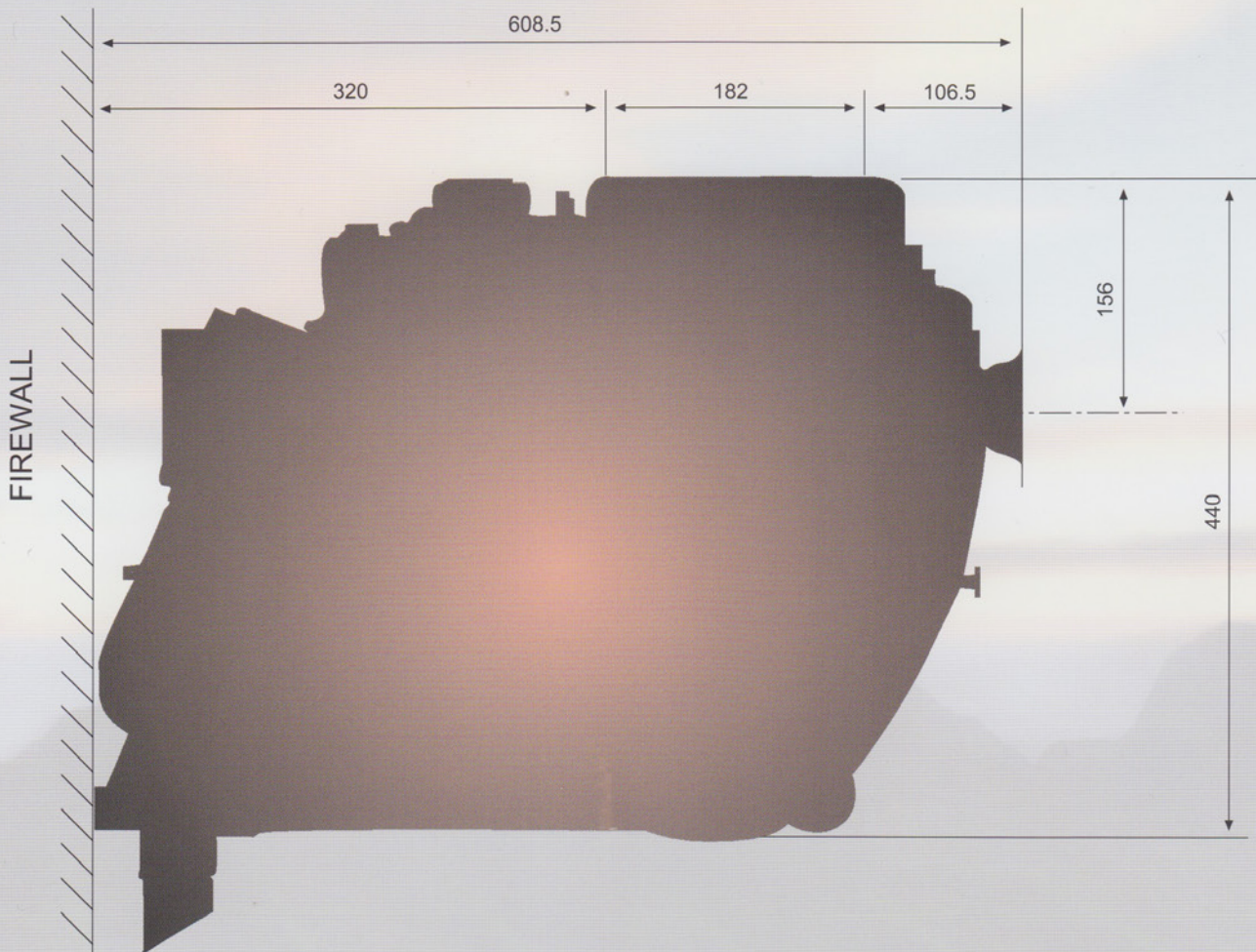
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AR682 ENGINE FOR UAVs

APPROX. EXTERNAL DIMENSIONS (mm)



Above shows typical Installation of complete power unit with accessories, excepting radiator.

PERFORMANCE UP A TYPICAL PROPELLER LOAD LINE

RPM	Power (bhp)	% of Max POWER	SFC lb/bhp/hr	FUEL USAGE (galls/hr)	
				IMP.	US
6000	77.0	100	0.53	5.6	6.7
5500	58.5	76	0.56	4.5	5.4
5000	44.0	57	0.54	3.3	4.0
4500	32.0	42	0.55	2.4	2.9
4000	22.5	29	0.58	1.8	2.2
3500	15.0	19	0.62	1.3	1.6