



***Austro Engine***

ENGINEERING INNOVATION

## Engineering Innovation

Austro Engine, a sister company of Diamond Aircraft and headquartered in Austria, is an innovative manufacturer of state-of-the-art aircraft engines with over 110 employees (Status July 2022). Founded in 2007, Austro Engine offers innovative solutions in jet fuel piston engines, AE300/AE330 (E4 Series) for Diamond Aircraft's DA62, DA42-VI and DA40 NG models as well as a proven line of rotary engines, AE50R and AE110R (R Series), for various UAV and APU applications. Since November 2008 Austro Engine holds a POA (Production Organisation Approval). In October 2009 Austro Engine has received the DOA (Design Organisation Approval) from EASA.

With the E4-Series of heavy fuel piston engines, Austro Engine is one of the leading jet fuel piston engine producer in General Aviation. The E4-Series stands for safe and reliable global operations with more than 2.5 million flight hours from more than 3,000 engines (Status March 2022).

Austro Engine products have proven their outstanding capabilities in versatile operation profiles all over the globe, generating countless stories of success for our partners. On a retrospective view, the company is certainly proud of having set new standards in engine reliability, quality and operational efficiency for our customers, whose appreciated involvement in continuous product and service improvements have been vital and the key to success. Being energized by achievements, Austro Engine is striving to further enhance operator's experiences.



## Propulsion Innovation

Innovation and industry leadership mean saying „no“ to doing things the way it's been done before. With Diamond's proprietary Austro Engine jet fuel piston engines, that means no manual mixture control, no magneto ignition, no manual priming, no prop control lever, no hard starting – hot or cold, no manual runup tests, no shock cooling, no cowl flaps, no power calculations based on rpm and manifold pressure, in short, less work and zero guesswork – more efficiency in every regard.

The redundant full authority digital engine control of Austro engines takes the guesswork out of powerplant management and offers simplified operation, on the ground and in the air. There is only one power lever per engine and actual power is displayed in percent power on the fully integrated Garmin G1000 NXi. Annunciations are clear and accurate with resettable and recorded audio and visual cautions and warnings that let you focus outside.

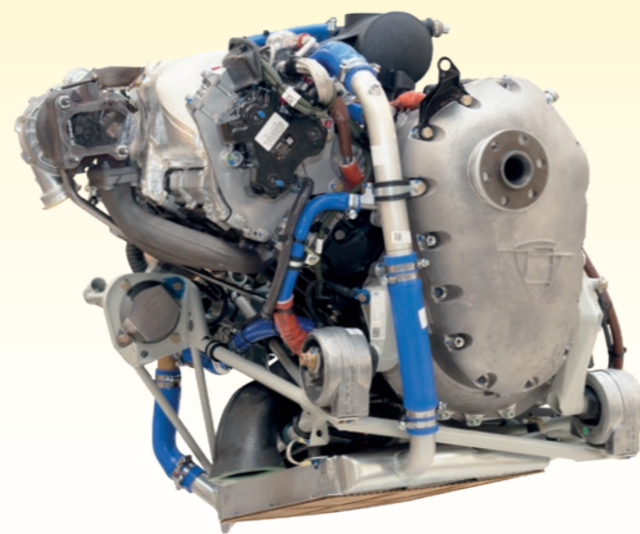
Maintenance on Austro engines is performed much the same as with most modern engines today, by connecting a computer and downloading recorded data including any present fault codes. Pre-emptive diagnostics detect issues before they develop into problems and that enhances safety and gives more peace of mind.

On top of all that, Austro's engines burn much less fuel, have extended maintenance intervals, use unleaded as well as cheaper and globally available jet fuel and run smoother and quieter.

E4 Series - Jet Fuel Piston Engines

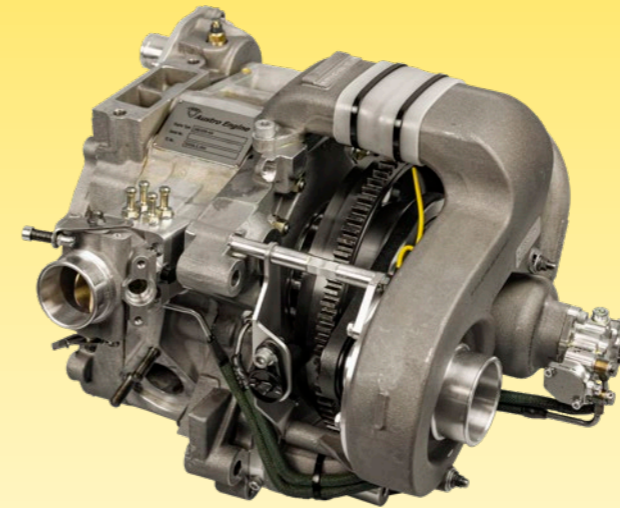


AE300  
(168 HP)



AE330  
(180 HP)

R Series - Rotary Engines



AE50R  
(50 HP)



AE110R  
(110 HP)

## E4 Series: AE300/AE330

SINGLE POWER LEVER CONTROL. LESS FUEL CONSUMPTION. BETTER PERFORMANCE.



**GLOBAL SUPPORT**



**OPERATION**  
> 2,500,000 flight hours



**PRODUCTION**  
> 3,000 engines in service



**SAFE DESIGN**  
**MTBF**  
> 110,000 h



**TBR**  
1,800 h

(Status March 2022)

### General

The AE300 is a four cylinder two liter piston engine, burning jet fuel (Jet A-1, Jet A, TS-1, RT, No. 3 Jet Fuel (China), JP-8) with 168 HP / 123.5 kW. The engine is controlled by an active electronic system with integrated single power lever design.

The AE330 is the most powerful heavy fuel engine in its class, based on the successful and reliable AE300. It provides more power than the AE300 at the same weight. Great fuel efficiency, reliability and easy operation make the AE330 the best aviation engine of today and the future.

### Reliability

State of the art technology ensure highest levels of safety and lower fuel costs. Modern common rail technology provides the highest levels of reliability. With a redundant EECU system the engine is failsafe. The Engine Diagnosis Tool Wizard communicates and delivers data via CAN - cable or wifi through the newly developed CAN port (available in 2022).

### Jet fuel use

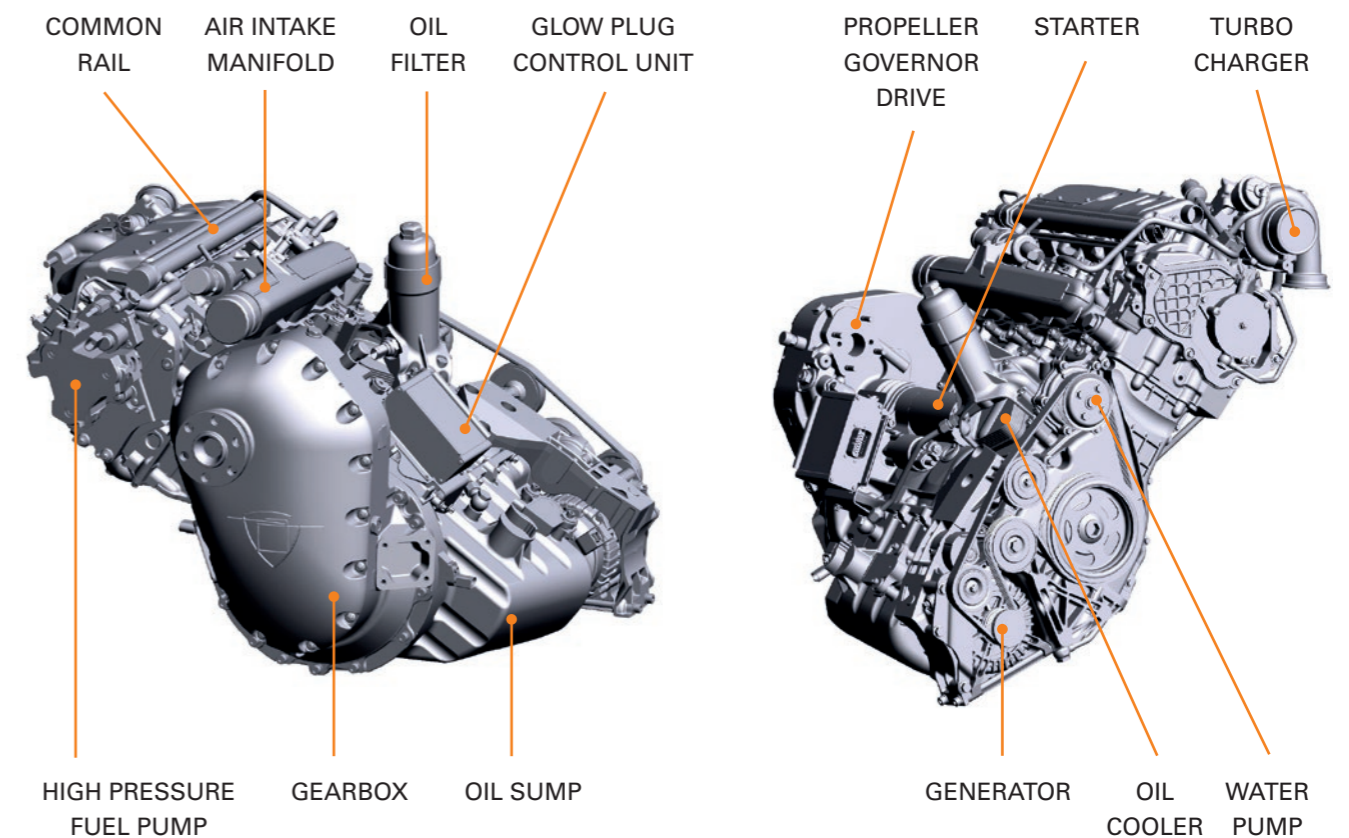
The AE300 / AE330 is jet fuel certified, easy worldwide operability is not a problem unlike Avgas engines, because in certain regions of the world Avgas is hard to get and often at multiple the price of jet fuel.

### Performance

The AE300 produces 168 HP / 123.5 kW and the AE330 180 HP / 132 kW for take off and maximum cruise power. The low vibration level and the single power lever design improve the engine operation comfort and take a lot of workload from the pilot. This makes the engine the ideal powerplant for flight schools, private pilots and even special mission aircraft.

## AE300/AE330 Facts & Specifications

| Specifications        | AE300                               | AE330                               |
|-----------------------|-------------------------------------|-------------------------------------|
| Max. take off power   | 123.5 kW (168 hp)                   | 132 kW (180 hp)                     |
| Max. continuous power | 123.5 kW (168 hp)                   | 126 kW (171 hp)                     |
| Max. torque           | 512 Nm                              | 550 Nm                              |
| Max. RPM              | 2,300 min <sup>-1</sup>             | 2,300 min <sup>-1</sup>             |
| Displacement          | 1,991 cm <sup>3</sup> (121.5 cu.in) | 1,991 cm <sup>3</sup> (121.5 cu.in) |
| Weight (dry)          | 186 kg (410 lb)                     | 186 kg (410 lb)                     |
| Fuel                  | Kerosene                            | Kerosene                            |
| Fuel consumption      | at 100% power 35 l/h                | at 100% power 39 l/h                |
| Fuel consumption      | at 60% power 19 l/h                 | at 60% power 21 l/h                 |



## R Series: AE50R

COMPACT. HIGH POWER-WEIGHT RATIO. LOW VIBRATION.



**GLOBAL SUPPORT**



**PRODUCTION**  
> 1,600 engines  
in service



**POWER : WEIGHT RATIO**  
2 : 1



**EASA CERTIFIED**



**POWER**  
50 HP

(Status March 2022)

### General

The AE50R is a 294 cm<sup>3</sup> single stage rotary engine with liquid cooling plus forced air cooling for the rotor core, lubrication via metered oil pump directly to main bearing and rotor tips with partial oil recovery system, twin spark plugs, electric starter, 14 Volt/18 Amp alternator, electronic fuel injection and electronic control system.

### Rotary Engine

The AE50R is a single stage rotary engine developing 41 kW and is the only rotary engine worldwide that is certified according to EASA Part 22 Subpart H on today's market. The remarkable power-weight ratio (2 hp : 1 kg) makes it the ideal engine for unmanned vehicles. With more than 1,400 engines produced, the AE50R has proven its reliability in both, manned and unmanned applications.



### Specifications

|                          |                                   |
|--------------------------|-----------------------------------|
| Displacement             | 294 cm <sup>3</sup> (17.94 cu.in) |
| Fuel                     | AVGas 100LL or RON 95 Unleaded    |
| Engine Oil               | approved synthetic                |
| Coolant                  | 50% glycol, water                 |
| Engine Control           | ECU                               |
| Ignition Timing          | variable                          |
| Spark Plug               | surface discharge                 |
| Alternator               | 14 Volt / 18 Amp                  |
| Weight (dry)             | 24.5 kg / 54.0 lb                 |
| Performance at sea level | 37.3 kW / 50 hp                   |
| Max. RPM                 | 7,750 min <sup>-1</sup>           |
| Max. Torque              | 52.5 Nm                           |

## R Series Development: AE110R

THE NEXT AUSTRO ROTARY ENGINE.



**GLOBAL SUPPORT**



**FUEL INJECTED**



**ELECTRICAL POWER**  
200 W



**WEIGHT**  
47 KG



**POWER**  
110 HP

(Status March 2022)

### General

The AE110R is a 588 cm<sup>3</sup> dual rotor rotary engine with liquid cooling plus forced air cooling for the rotor cores, lubrication via metered oil pump directly to main bearing and rotor tips, twin spark plugs, electric starter, 14 Volt / 18 Amp alternator with high power output, electronic fuel injection and electronic control system.

### Rotary Engine

The AE110R is a single stage rotary engine developing 80 kW. The remarkable power-weight ratio (2 hp : 1 kg) makes it the ideal engine for unmanned vehicles and VLA. To address customer requirements best as possible, this engine is not certified yet. Please contact us to discuss your specific requirements.



### Preliminary Specifications

|                                                                      |                     |
|----------------------------------------------------------------------|---------------------|
| Engine type                                                          | Rotary engine       |
| Max. takeoff power                                                   | 80 kW / 110 hp      |
| Displacement                                                         | 588 cm <sup>3</sup> |
| RPM@ max. takeoff power                                              | 7,750 rpm           |
| Max. continuous power                                                | 70 kW / 95 hp       |
| RPM@ max. continuous power                                           | 7,100 rpm           |
| Electrical power output                                              | 200 W               |
| Base engine weight (no fuel pump, muffler, propeller, coolant, etc.) | 47 kg / 103.5 lbs   |

All specifications, weights, representations, colors, equipment, use of materials and model references provided herein are for purely illustrative purposes and legally non-binding, subject to alterations and not warranted or guaranteed to be true or accurate.

## More from Austro Engine

### Engine Control Units

Engine control units for rotary and piston engines tailored to customer needs for special applications and light aircraft.

### Engine Diagnosis Tool Wizard (in development)

This diagnosis tool can communicate and deliver data via cable or wifi through the CAN port. This allows to control and monitor the engine and to receive real-time status information.

### EASA certified maintenance training

To make your engineers proficient with our state of the art engines, we offer EASA Part 147 maintenance trainings to all our customers.

### We Keep You Flying - Customer Support

Wherever you are in the world, we are here to help you. Austro Engine's high-class global network of authorized service centers assures quick help and spare parts supply to keep you flying.

### Customer Support

- Hotline (+43 2622 23000 2525)
- Trouble shooting support
- Online 3D IPC
- Online Manuals



## Reference Customers



DA62



DA62 MPP



DA42-VI



DA42 MPP

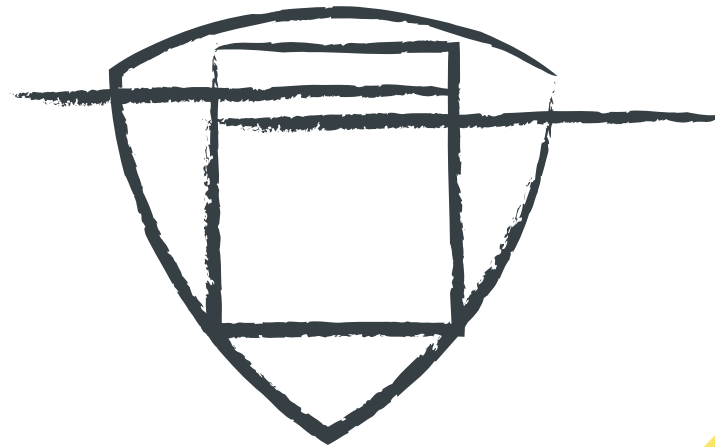


DA40 NG



**Austro Engine is your single point of contact for all engine related matters.**

Take advantage of our state of the art technology and effectively reduce your operating costs.



## **Austro Engine GmbH**

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