

## **Innovative Performance.**









Austro Engine GmbH, an independent and privately held company, develops and manufactures rotary and Jet A1 piston engines for various original equipment manufacturers of General Aviation aircraft and unmanned aerial vehicles.

Austro Engine

The company was founded in 2007 and inherited the engine business from Diamond Aircraft Industries GmbH, a world class designer and manufacturer of a wide range of innovative and modern General Aviation aircraft.

Located in a brand new 7600 sqm facility in the Civitas Nova industrial area in Wiener Neustadt, Austria, our plant features modern production gear and tools as well as four engine and one propeller test stands.

We operate in line with top level quality and safety standards and always strive for the perfect solution. Our highly motivated employees are passionate about delivering the most effective product for your needs.

In November 2008 Austro Engine has received the Production Organisation Approval AT.21G.0010 from Austro Control GmbH.

In October 2009 Austro Engine has received the Design Organisation Approval AT.21.J.399 from Austro Control GmbH.



## **Partners**

Austro Engine's business philosophy is based on close cooperation with leading industry partners. Using and developing Austro Engine's aviation expertise, together with the technology leadership of our partners, we provide innovative solutions customized to the specific needs of our customers.

In cooperation with the world's leading manufacturers in engine engineering, gear engineering and engine management Austro Engine has developed the most modern and fuel efficient kerosene (Jet A1) piston engine available in General Aviation.



Mercedes-Benz technology

MBtech Powertrain GmbH

Engineering part of Daimler AG, responsible for the core engine



Hör Technologie GmbH

Specialist in gear engineering, responsible for the gear box



Bosch General Aviation Technology GmbH, Vienna

Engine Management Systems for General Aviation, responsible for engineering & production of the EECU





# 300

## Jet A1 Piston Engine

With the brand new AE 300, Austro Engine GmbH has launched the leading Jet A1 piston engine in General Aviation. Numerous testing hours have proved its endurance and reliability. Highest performance and higher efficiency compared to similar products on the market.

The AE 300 is a four cylinder two liter piston engine which uses Jet A1 to produce 123.5 kW. This engine is initially installed in aircraft of Diamond Aircraft Industries GmbH, but is also available to other OEMs.

This engine is certified and has already received following Type Certificates:

- EASA Type Certificate EASA.E.200 according EASA CS-E in January 2009

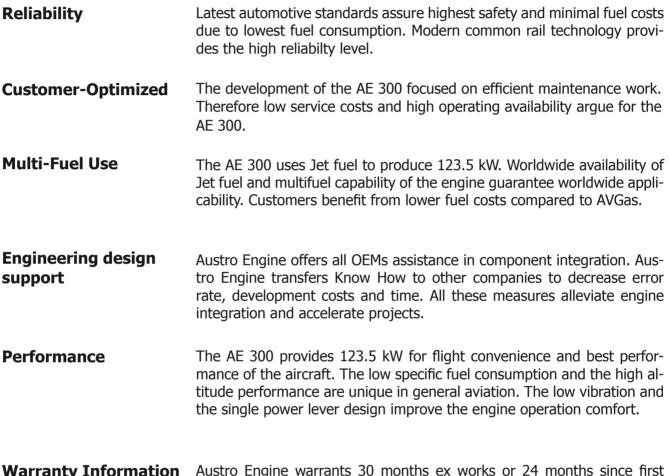
- FAA Type Certificate E00081EN according FAA part 21.29 in July 2009

- TSA Type Certificate IAC CT301AM in July 2009

and other regions are following soon....

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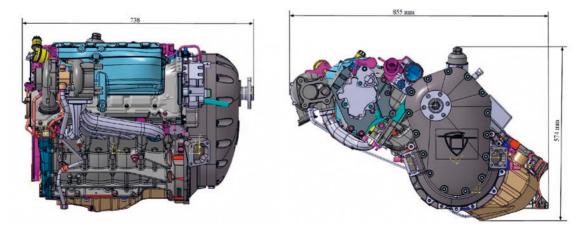




**Key Benefits** 

**Warranty Information** Austro Engine warrants 30 months ex works or 24 months since first operation. For detailed information have a look at the complete warranty conditions.

#### Dimensions





The AE 300 is a liquid-cooled, in-line 4-cylinder engine with double overhead General camshaft (DOHC). Every cylinder has four valves which are actuated by the cam follower. The direct fuel injection is delivered by common rail technology. The power is provided by the integrated turbo charger. The engine is controlled by an electronic controlled system with integrated single power lever design. The propeller pitch change is actuated by a governor which is controlled by the engine electronic controlled unit. This allows the single power lever design system.

**Technical Data** 

Scope of Supply The engine is equipped with an electrical starter, an alternator, a water pump, an oil pump and an integrated oil to coolant heat exchanger. The propeller is driven by an integrated gearbox which is fitted to the engine using an integral torsional vibration damper.

Performance	Power			Fuel Consumption	
	kW	123.5		MTOP (100% - 123.5 kW)	35.1 l/h
	hp	168		MCP (92% - 114 kW)	31.5 l/h
	1/min	3880		Best Economy (73% - 90 kW)	21 l/h
Dimensions / Weight	Displacem Weight (w Gear Ratio	vet) 185 k	-	121.5 cu in 414 lbs	
Altitude Performance		180			
of the AE 300		150 Lyco	ming IO360	AE 300	
compared with TAE 125		120 Centurion 2	0		
and Lycoming IO360 **	[HP]				
	Power [HP]	90			
		60			
		30			
		0 0 300	0 600	0 9000 12000 15	000 1800

Altitude [ft]

\* based on Operation & Maintenance Manual, Version 1/6, Thielert Aircraft Engines GmbH, Germany

\*\* based on Operator's Manual, 6th Edition, Sept. 1999, revised April 2005, TEXTRON Lycoming, U.S.A.



## **Rotary Engine**

The AE 50R is an AVGas single rotary engine with 40.4 kW. This engine is certified according to EASA Part 22 Subpart H. The enormous power-weight relation results in an unique position on the global market.

Since launching our first line of products, the AE 50R series, our 40.4 kW rotary engine product, has built a successful track record, with more than 700 installations in motor gliders and UAV applications of leading OEMs.

## Small.

## Unique.

## **Low Vibration.**





The AE 50R is a 294 cm<sup>3</sup> single 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.

Specification	Fuel Engine Oil	AVGas 100LL or RON 95 Unleaded approved synthetic
	Coolant	50% glycol, water
	Engine Control	ECU
	Ignition Timing	variable
	Spark Plug	surface discharge
	Alternator	14 Volt / 18 Amp

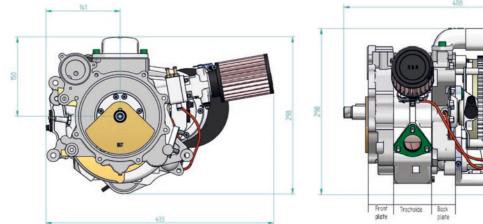
Performance	Performance at sea level			Torque	
	kW	HP	RPM	Nm	RPM
	40,4	55	7750	52,5	7750

#### Weight

General

Weight		lbs
Engine core, Ingnition units, Voltage regulator	24.5	54.0
Typical coolant in radiator, hoses and engine casting		7.3
Engine total weight	27.8	61.3

#### **Dimensions**





## **Rotary Engine**

Our rotary engines are small, lightweight, and have an outstanding low vibration. Their reliability and adaptability enabled the development of a larger, stronger rotary engine, the AE 75R, which will soon be available.

The AE 75R is a rotary engine which uses AVGas to produce 55 kW. The installation dimensions are similar to the AE 50R. An improved electric electronic controlled system is used.

## **Powerful.**

## **Efficient.**



## **Low Vibration.**



General	The AE 75R is a 404 cm <sup>3</sup> single 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, partial oil-recovery, EECU, twin spark plugs, twin injection, 14 Volt 40 Amp alternator and electric starter.

Specification	Fuel Engine Oil Coolant Engine Control Ignition Timing Spark Plug Alternator	AVGas 100LL or RON 95 Unleaded approved synthetic 50% glycol, water EECU under development surface discharge 14 Volt / 40 Amp
	Alternator	14 Volt / 40 Amp

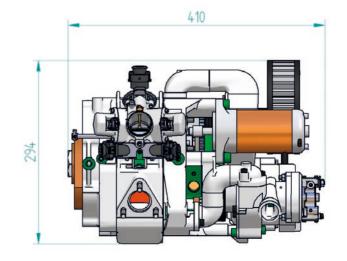
Performance	Performance at sea level		Torque		
	kW	HP	RPM	Nm	RPM
	55	75	7000	70	7000

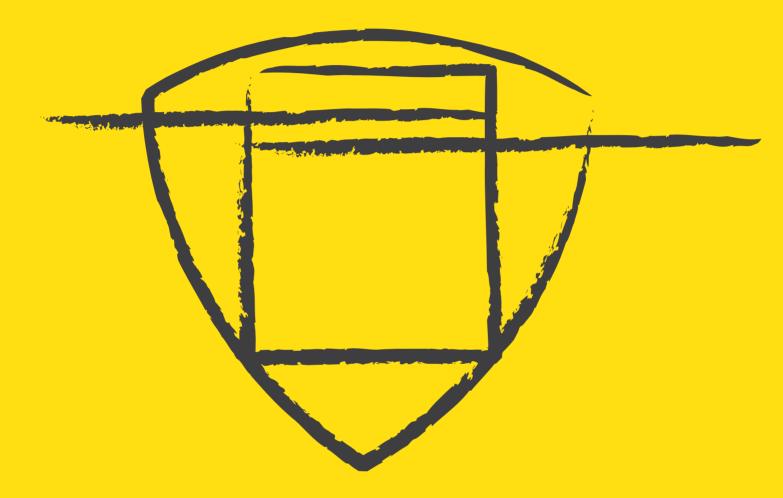
### Weight

Engine/Parts	kg	lbs
Engine core	28	61.7
Ingnition units	0.9	2.0
Radiator	1.9	4.2
Typical coolant in radiator, hoses and engine casing	4.8	10.6
Engine total weight approx.	35.6	78.5

#### Dimensions







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