

DA42 New Generation Introduction Guide



 **Diamond**
AIRCRAFT



A New Generation of Diesel-Engined Aviation.

TWO THUMBS UP

Diamond Aircraft Industries has equipped its DA42 with a new Diesel-power plant. The AE300 leaves an excellent impression. It is powerful and economical at the same time. The new DA42 NG represents a definite improvement over the previous version. All these new facts make the DA42 with AE300 a great choice for individual owners, as well as for flight schools looking to add modern appeal and technology to their flight line.

AN AIRCRAFT THAT WILL DETERMINE THE FUTURE OF DIESEL-ENGINED AVIATION

The 336hp make for impressive acceleration, which unsurprisingly is noticeably increased in comparison with the basic DA42. With the engines delivering 100 %Take Off power, the nose is raised to 12° and it climbs at 90 KCAS burning 9.4 US gal per hour per engine with the variometer oscillating between 1,100 and 1,300 fpm. That is truly impressive. Five minutes after Take Off we are retarding to max continuous power of 92% and still get a climb rate of approximately 1,100fpm. The fuel flow meter is indicating 8.5 USgal/h now.

Levelling off at 12,000 ft and the power indication still at 92% we are accelerating to 145 KCAS which leads to a true airspeed of 183 kts. The service ceiling is 18,000 ft and it can maintain 14,000 ft with one engine out. We are engaging the autopilot and enjoying the luxury of the GFC 700 with its yaw damping system. Bringing the power back to a more normal

“Our Vision: revolutionize general aviation. Our Goal: set the highest standards possible in aircraft production and development. Our Promise: combine the most progressive materials and technology to deliver highly reliable, economic aircraft that are less damaging to the environment while never sacrificing performance, safety or beauty.”

Christian Dries, CEO, Diamond Aircraft

75 % power, the engines are burning 6.8 US gal per engine and delivering 175 KTAS, which is magnificent for just 51 l of Jet A1 per hour.

THE RESULT

With the DA42 NG you will enjoy lower operating costs, lower fuel consumption with an increase of comfort, power and performance.



Introduction Guide.

THE BEST TEAM HAS BEEN ASSEMBLED

With our partners you have the highest possible experience level of developing Diesel engine technology. The development of the AE300 has been enhanced through our partnerships with MB Tech, Bosch General Aviation.

SOLID DEVELOPMENT

We are convinced we have developed the most excellent aircraft engine for your purposes. Our sincere belief in this method of developing and then producing the complete aircraft system is demonstrated by the fact that we have invested nearly 50 million Euros in this project.

“ONE PACKAGE WARRANTY”

You will have an aircraft and engine – they are surely dependent upon each other. The DA42 New Generation will certainly benefit upon the manner in which each complements the other. This is why we offer you a one-shop-STOP – principle for airframe/engine guarantee cases. That means for you: One reliable partner for airframe/engine guarantee and ease of handling all support issues.

MAINTENANCE ISSUES

Design and construction of engine was and is developed to reduce service intervals for **SEPP** (scheduled exchange parts program): **1) Alternator** (currently change during initial phase every 300 hours) **2) High pressure pump** (currently change du-

ring initial phase every 300 hours) **3) Torsion Vibration Damper** (currently check during initial phase every 300 hours)

As with all new aircraft/engine combinations, the relevant aviation authorities will increase these scheduled inspection/change times based upon performance.

HIGHER RELIABILITY

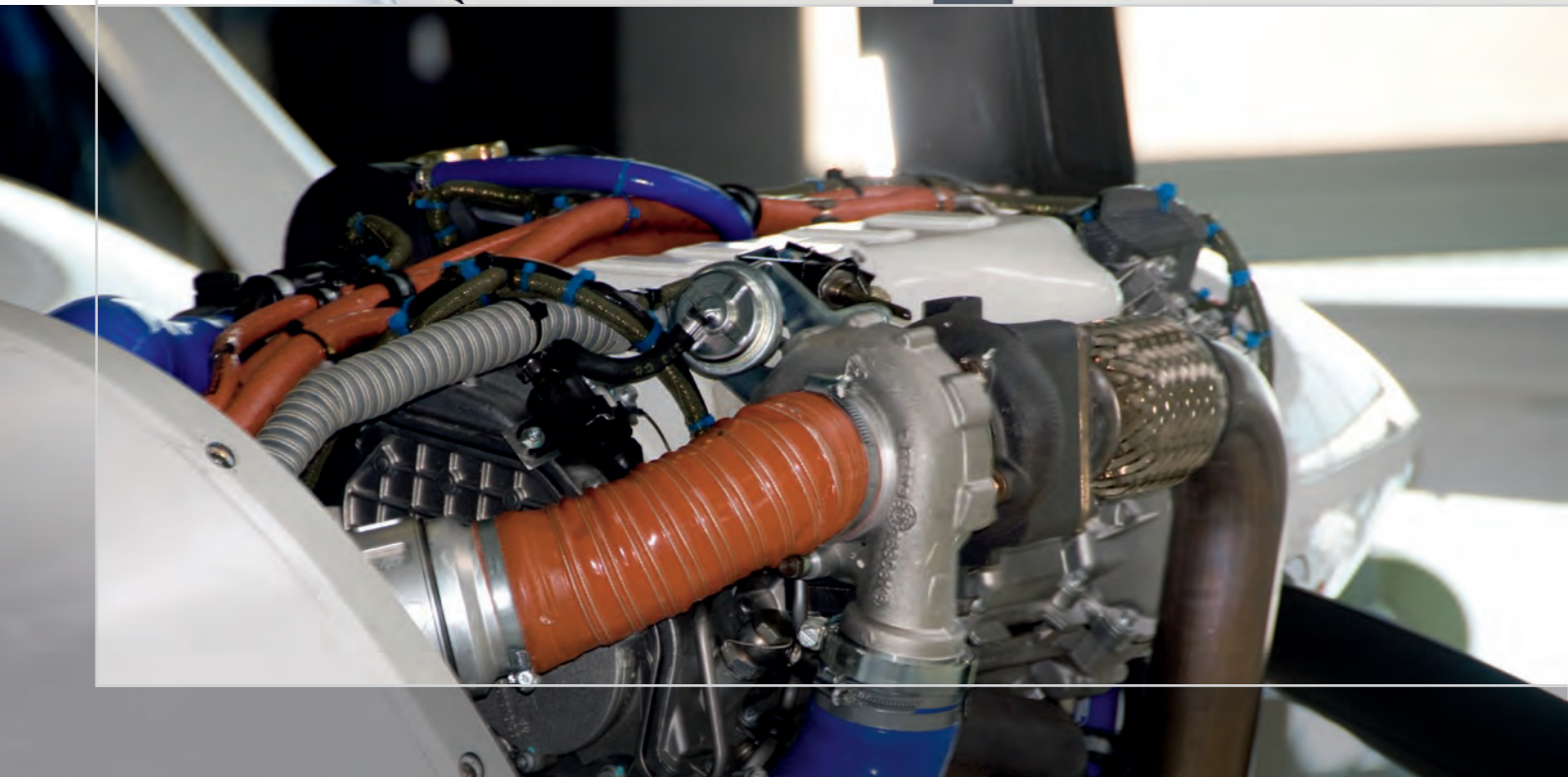
This is achieved by robust technology and through cooperation with our partners, we have developed a solid quality of engine components.

HOW TO DESCRIBE THE FEEL OF FLYING THE DA42 NEW GENERATION?

The aircraft runs smoother and provides a higher single engine performance. It will maintain full performance at the critical altitude of 10,000 ft. You will experience a lower specific fuel consumption compared to previous Diesel aircraft engines.

FURTHER PRODUCT IMPROVEMENTS WITH THE DA42 NG?

All aircraft are equipped with GFC700 Automatic Flight Control System for your complete flying comfort and Garmin Chart-View will display aviation charts directly on PFD/MFD. The system has been prepared to have Garmin SVT (Synthetic Visual Technology) on the G1000.



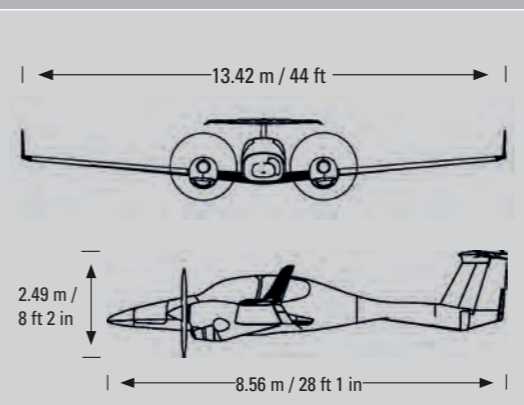
Power Plant

Engine	2x Austro Engine AE300 Turbocharged Common-Rail Injected 2.0 Liter Diesel Engine with 168 HP and EECU Single Lever Control
Propeller	2x MT Propeller MTV-6-R-C-F/CF187-129 3-blade Constant Speed Propeller

Performance/Consumption

Rate of climb at sea level MTOW	5.84 m/s ¹⁾	1,150 fpm ¹⁾
Rate of climb in 10,000 ft MTOW	5.18 m/s ¹⁾	1,020 fpm ¹⁾
Max. operating altitude	5,486 m	18,000 ft
Max cruise speed in 14,000 ft	341 km/h ¹⁾	184 kts TAS ¹⁾
Cruise speed @ 75% in 14,000 ft	322 km/h ¹⁾	174 kts TAS ¹⁾
Cruise speed @ 60% in 14,000 ft	282 km/h ¹⁾	152 kts TAS ¹⁾
Consumption @ 60%	38.9 lt/hr total	10.3 gal/hr total
Range @ 75%, standard/long range tank	1,139 km/1,759 km	614 nm/950 nm
Range @ 60%, standard/long range tank	1,308 km/2,185 km	707 nm/1,180 nm
Takeoff distance, 50 ft above the take off surface (ISA sea level)	733 m ¹⁾	2,405 ft ¹⁾
Landing distance, 50 ft above the landing surface (ISA sea level)	618 m ¹⁾	2,027 ft ¹⁾
Stall speed, landing configuration, full flaps, gear down	113 km/h CAS ¹⁾	61 kts CAS ¹⁾
Stall speed, clean	126 km/h CAS ¹⁾	68 kts CAS ¹⁾
Maximum demonstrated crosswind	46 km/h	25 kts

Dimensions/Weights



¹⁾ at 1,900 kg/ 4,189 lbs TOW

Length	8.56 m	28 ft 1 in
Height	2.49 m	8 ft 2 in
Wing span	13.42 m	44 ft
Seats	4	4
Max. Take-off Weight (MTOW)	1,900 kg	4,189 lbs
Empty weight	1,415 kg	3,119 lbs
Fuel capacity (useable fuel) standard/long range	189.3 lt/ 287.7 lt ²⁾	50 US gal/ 76 US gal ²⁾
Fuel grades	Jet A1	

Specifications apply to standard equipped aircraft, if not otherwise stated. The above quoted data are approximately specifications and may change without notice.

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