Piper Archer DX powered by Centurion 2.0S.

Piper Aircraft launched early 2014 a diesel version of the Archer at the Aero Friedrichshafen in Germany which is powered by a Continental / Centurion 2.0S JET-A compression-ignition engine. Since receiving it's EASA STC in Europe several aircraft have been delivered to various flight schools in Europe.

The Centurion 2.0S engine, with a three-blade MT composite, constant-speed propeller, is certified to use both **Jet-A** and diesel fuel and with the two fuels in any mixture ratio.

Interestingly Continental recently announced at the AERO Friedrichshafen / Germany New, longer TBR's *(time between replacements)* for its four-cylinder engines, extending to 2100 hours for both the CD-135 and CD-155 Continental. Also the gearbox gets longer intervals, doubling to 1200 hours from the 600 currently imposed.

The new extended hours apply to new engines as well as replacements being sent to clienteles. Aviall is the official distributor for its Continental and PMA parts.

With the Archer DX Piper owners and operators have access to more economical and readily available fuel supplies, especially in areas where traditional leaded avgas is hard to find and expensive.

The performance specs show a

Cruise Speed	123 KTAS / 228 km/h at 75% Power;
Range	848 nm / 1.570 km with 45 Minute Reserve;
Service Ceiling	14,100 ft / 4,298 m (certified);
Take-off Distance	919 ft / 280 m “”over 50 ft obstacle 1,673 ft / 510 m;
Landing Distance	920 ft / 280 m

The DX also features the Garmin G1000 avionics system in a special high-durability flight school interior.

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Engine control is via a single Fadec *(Full authority digital engine (or electronics) control)* and single Fadec thrust-lever. The engine start is by push-button; - thrust lever back to idle, battery on, control light to go out, press and hold the overhead starter button. Run-up: power to idle, press Fadec Test Button; - the dual-channel Fadec computers run a complete self-test.

A full load of 48 gallons of JET-A, could provide an endurance of up to of eight-hours. An overall uncomplicated and easy to operate aircraft and as expected, stalls are a non-event. The Archer DX engine's smoothness and lack of engine noise is standing out and adds to the comfort.

Compared to other piston engine aircrafts in its class here are a couple of findings:

The Lowest Fuel Costs per Nautical Mile
Compared to the average fuel costs for all Private aircraft, which are $ 0.66* per nautical mile and 26.00¢* per seat per nautical mile, the Piper Archer DX costs $ 0.36 less per nautical mile (55%) 16.00¢ less per seat per nautical mile (62%) **assumes a $6 cost per gallon of jet fuel*

The Most Range
Compared to the average Private Piston-driven Propeller Plane, which has a maximum range of 700 nautical miles, the Piper Archer DX can fly 148 nautical miles farther (21%)

The Fastest Piston-driven Propeller Planes
Compared to the average Private Piston-driven Propeller Plane, which cruises at 151 knots (174 mph) to maximize range and can cruise at a maximum speed of 130 knots (150 mph), the Piper Archer DX:

Maximizes its range at a 77 knot (89 mph) higher speed (51%) Compared to the average range-maximizing cruise speed and maximum cruise speed for all Private aircraft, which are 182 knots (209 mph) and 174 knots (200 mph) respectively, the Piper Archer DX maximizes its range at a 46 knot (53 mph) higher speed (25%)

The Shortest Take-off Length
Compared to the average take-off and landing field lengths for all Private aircraft, which are 1,703 ft and 1,795 ft respectively, the Piper Archer DX needs 784 ft less (46%) respectively 875 ft less (49%)

The Lightest Planes at Take-off
Compared to the average Private Piston-driven Propeller Plane, which weighs 2,973 lbs at take-off, the Piper Archer DX is 423 lbs lighter (14%)

Compared to the average take-off weight for all Private aircraft, which is 6,000 lbs, the Piper Archer DX is 3,450 lbs lighter (58%)

At a list price of $399,495 the Archer DX is about $ 54,495 more expensive than a similarly equipped Lycoming AVGAS-powered Archer LX model. The diesel-powered DX burns less fuel and performs better at higher altitudes. Considering typical flight school operations that difference can be saved in one-year operation with an Archer DX already!

For flight schools and pilots needing the flexibility of an advanced training airplane with the flexibility to burn more widely available JET-A in countries where AVGAS is expensive or unavailable, the Archer DX is certainly the right airplane for the job.