

# P TwentyTen MkII TDI



JET A-1

JET A

**Diesel**

Specification and Description

# P2010 P TwentyTen TDI

This document applies only to the Tecnam P2010 TwentyTen TDI and is published for the purpose of providing general information for the evaluation of design, powerplant, performance and equipment.



Should more information be required, please contact:

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The P2010TDI is where performance and comfort meet in one sexy IFR package. 4 seats. 3 passenger doors. 1 baggage door. Continental CD-170. Metal wings, landing gear and stabilator. Carbon fibre fuselage. Balanced controls. Unsurpassed stability.

The state-of-the-art Tecnam P TwentyTen is the most advanced high-wing modern single-engine aircraft in the marketplace, today with Continental CD-170 Diesel engine. This four-seater aeroplane brings together an advanced technology all carbon fibre fuselage with a metal wing and stabilator, an expansive cabin featuring ergonomic front and rear seats with exceptional legroom and a separate third entry door.

The wide composite cabin allows for a large instrument panel with state of art avionic options: twin-screen G1000 Nxi IFR, new Flat-Panel Suite with integrated GFC700 autopilot. Carbon fibre ensures smooth surfaces and allows

for an elegance and styling you would expect from Tecnam's Italian design team. Metal is used for the wing and stabilator to provide further strength and stability. The wing is based on the well-proven NACA63A aerofoil. Through partial tapering, the design brings it close to the optimal lift distribution (elliptical). The all movable type (stabilator) horizontal tail, a trade mark of all Tecnam aeroplanes, allows for excellent controllability and 'hands off' longitudinal stability.



#### **Tecnam's choice of Diesel fuel offers the following benefits:**

- Reliability and safety thanks to the redundant FADEC system (Full Authority Digital Engine Control) without mechanical back-up;
- Significantly lower operating costs due to lower consumption and lower fuel prices for kerosene in many countries; Comfortable operation;
- Jet fuel, same as for civil and military jet aeroplanes;
- Compliance with U.S. DoD requirements: one single fuel;
- Consumption up to 50% (long range cruise) less fuel than comparable ignition engines;
- Payload and range improvement;
- Instant start;
- Availability of supply where Avgas is unavailable.

#### **Certification**

The Model P TwentyTen is certified to the requirements of EASA CS-23 - FAR 23 including day, night, VFR and IFR. Export certification requirements may require additional equipment and charges.

Dimensions	ft	m
Height	8.66	2.64
Length	25.98	7.92

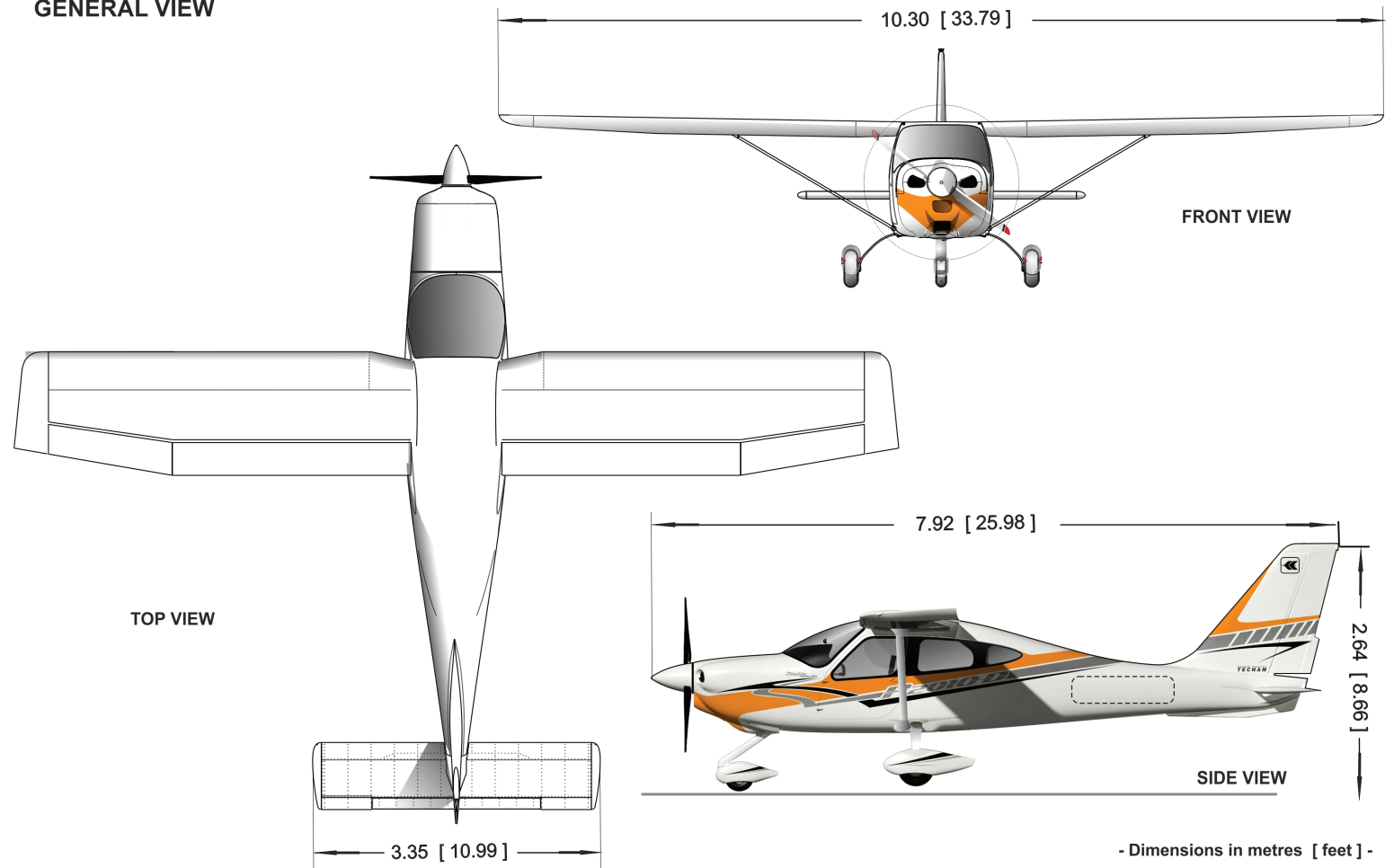
Wing	ft	m
Span	33.79	10.3
Area	149 ft <sup>2</sup>	13.9 m <sup>2</sup>

Cabin	ft	m
Height	3	0.91
Width	3.74	1.14

Baggage Door	ft	m
Height	1.28	0.39
Width	1.57	0.48

Cabin Door	ft	m
Height (front)	3.05	0.93
Height (rear)	3.00	0.91
Width (top)	2.88	0.88
Width (bottom)	2.33	0.71

### P2010 TDI GENERAL VIEW



- Dimensions in metres [ feet ] -



DESIGN WEIGHT AND LOADING*	P2010 TDI	
	lb	kg
Maximum Take Off Weight	2,557	1,160
Empty Weight, Standard**	1,753	795
Useful Load	805	365
Baggage allowance	88	40

\*Empty weight could vary by  $\pm 2\%$

\*\*Without unusable fuel

PERFORMANCE	Continental CD-170 168 hp 3B Variable Pitch Propeller	
	Max Cruise Speed KTAS*	136 kts
Cruise speed 75% @ 6000 ft	127 ktas	235 km/h
Cruise speed 75% @ 9000 ft	132 ktas	244 km/h
Stall Speed (Flaps Down Power Off) KCAS	52 kts	96 km/h
Practical Ceiling	18,000 ft	5,486 m
Take off run	1246 ft	380 m
Take off distance	1903 ft	580 m
Rate of climb	787 ft/min	4 m/sec
Landing Run	853 ft	260 m
Landing Distance	1,772 ft	540 m
Range**	1,050 NM	1,940 km

\*Sea Level

\*\* (75% + res. 30 min) max fuel



All estimated performance data are based on aeroplane weights at MTOW; standard atmospheric conditions; level, hard surface, dry runways, no wind.

The P2010 TDI is the aircraft with the longest range and lowest consumption in Tecnam fleet.

TYPICAL MISSION EXAMPLES	Fuel	Occupants + Luggage
400 nm FL90 Mission [MTOW] 75% PWR	24.3 USG - 92 lt	639 lb - 290 kg
600 nm FL90 Mission [MTOW] 75% PWR	34.4 USG - 130 lt	573 lb - 260 kg

## FUEL CONSUMPTION

Mission #	% PWR	Fuel Consumption	Speed
1	75%	6.6USG/h - 25lt/h	127 ktas (6,000ft)
			132 ktas (9,000ft)
2	60%	5.2USG/h - 19.5lt/h	110 ktas (6,000ft)
			115 ktas (9,000ft)

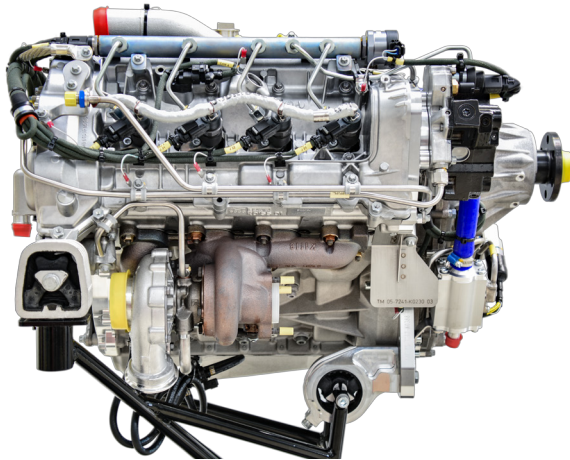


Central Engine PWR lever

The P TwentyTen TDI is powered by the Continental CD-170, which is a liquid-cooled 4-cylinder in-line four-stroke Diesel engine with DOHC (double overhead camshaft). The valves are actuated by a cam follower. The operation of the direct Diesel injection engine is based on the common-rail technique and is turbo charged. The engine is controlled by a FADEC system. The propeller is driven via an integrated gearbox (i=1.69) with a clutch or dual

mass flywheel. The engine is equipped with an electric starter and one alternator and optional auxiliary drive. Engine monitoring is fully integrated inside the avionic suite screens and allows a management of power, with significant fully automatic mixture control (absence of related lever and always guarantees the best fuel/air ratio for every single cylinder).

#### Continental CD-170



**Diesel**

**JET A-1**



Max. Take Off Power	170HP (DIN)
Max. Continuous Power	155HP (DIN)
Fuel	JET A-1 (ASTM D 1655) JET A (ASTM D 1655) Diesel (EN 590)
Integrated gear box	1 : 1.69
Engine Protection features	- Knock Control (independent for each cylinder) - CHT, TIT over temp protection
Diagnostics	- Out of Range Failures - In-Range Errors from sensor (Cross Checks) - All faults are logged in the ECU memory - Service Fault History - Record of "Fault Clearing History"
Pilot Interface	Only 1 Control Lever (PWR, PROP) Single Button Start

- **G1000 Nxi** Integrated Flight Deck System, includes:
  - GDU 1050 10-inches PFD
  - GDU 1050 10-inches MFD
  - Dual GEA 71 Engine & Airframe unit
  - Dual GIA 63WAAS Com/Nav/GPS/GS/Loc
  - GMA1347 Digital audio system
  - GMU44 Magnetometer
  - GDC72 Air data computer
  - GRS79 AHRS
  - GTP59 OAT
  - GTX345R Mode S Transponder (ADS-B IN and OUT)

### FLIGHT INSTRUMENTS and INDICATORS

Magnetic Compass  
 MD 302 Standby Attitude Module  
 Pitot System Heated  
 Static System  
 Alternate Static Source  
 Stall Warning Audible  
 Stabilator Trim Position Indicator  
 Rudder Trim Position Indicator

### FLIGHT CONTROLS

Hydraulic Toe Brakes  
 Parking Brake  
 Electrical Flaps  
 Dual Flight Controls  
 Castering Nose Wheel  
 Ailerons Lock and Elevator Lock  
 Flight Trim Controls:
 

- Rudder with Indicator
- Stabilator with Indicator

 Engine Controls:
 

- Throttle
- Alternate Air

Fuel Control Selector with LH/RH/OFF



Options also as pictured

### ELECTRICAL SYSTEM

Alternator, 28 Volt, 60 Amp  
 Battery, 24 Volt 8.0 AH  
 Rocker Switches:
 

- Master Switch
- Fuel Pump
- Landing Light
- Taxi Light
- Navigation Lights
- Strobe Light

 External Power Supply Receptacle

Circuit Breaker Panel  
 Static Discharge Wicks  
 Landing/Taxi Light LED

### FUEL SYSTEM

Two Integral Fuel Tanks With 240 Litres (63 US Gal) Total Capacity  
 Two engine driven fuel pumps  
 Support Fuel Pump Electric  
 Fuel Tank Quick Drain  
 Fuel Selector Valve, LH/RH/OFF

### INTERIOR

Pilot and Co-Pilot Seats Leather  
Adjustable Fore and Aft  
Vertical Adjustment  
Two Rear Passenger Seats Leather  
Seat Belts & Shoulder Harness, All Seats  
Wall To Wall Carpeting  
Hand Held Fire Extinguisher  
Map & Storage Pockets  
Radio Call Plate  
Tow Bar  
Soundproofing  
Luggage Compartments  
Overhead Cockpit Speaker  
Four Position Intercom System  
First Aid Kit

### EXTERIOR

Epoxy Corrosion Proofing, All Structure  
LH/RH Front Door Pilot/Co-Pilot, Lock and Key  
RH Rear Door Passenger  
RH Baggage Door With Lock  
Rear Window  
All Lateral Windows Tinted  
Fixed Landing Gear  
White Polyurethane Exterior Paint  
Tie Down Rings  
Main Wheels, 6.00 X 6  
Nose Wheel, 5.00 X 5

### EXTERIOR LIGHTS

Nav. Lights LED With Strobe  
Landing/Taxi Light LED

### CABIN COMFORT SYSTEM

Windshield Defroster  
Ventilator Adjustable, 4 Place  
Heating System  
Soundproofing  
Cabin Monoxide Detection System

### POWERPLANT & ACCESSORIES

Continental CD-170 Engine 170 HP  
Tubular Steel Engine Mount  
Alternate Engine Air  
Fadec thrust-lever  
Engine Exhaust Muffler  
Constant speed MT 3 Blade Propeller  
Propeller Spinner  
Electric Starter

### PRODUCT SUPPORT/DOCUMENTS

Manufacturer's Full Two Year Limited Warranty  
Pilot's Operation Handbook  
Maintenance Manual  
Parts Catalogue  
Aircraft Log Book  
Engine Log Book

### STANDARD AVIONICS PACKAGE

#### Also includes:

Altitude Encoder  
Avionics Master Switch  
Mic & Phone Jacks Pilot/Copilot/Passengers  
Hand Held Microphone  
Avionics Circuit Breaker Panel  
Pilot And Co-Pilot PTT  
ELT 406 mhz  
DME KING KN63 – Displayed on PFD

#### Antennas:

- Marker Beacon Antenna
- Transponder Antenna
- VHF Antenna
- NAV Antenna
- Emergency Locator Transmitter Antenna

A) Leather anthracite grey  
B) Medium grey



A) Leather anthracite light grey  
B) Anthracite grey

Standard Interior comes with blue seats and ivory cabin.

**Premium option** makes your aircraft more luxurious: Alcantara leather and a dark ceiling exceed your flying experience with a unique blend of ingredients.

Your aircraft interior is now more exclusive with electrically adjustable comfort front seats while guaranteeing absolute compliance with the industry's strictest standards.

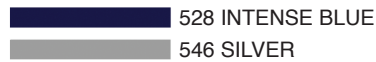
### OPTION LIST

Code	Kg	Description
P201	10	Autopilot GFC700 Garmin – Fully integrated two-axis
P202	4,5	ADF RA3502 Becker remote unit
P203	10	TAS GTS 800 Garmin with Dual GA58
P204	4,5	Interior Premium Edition: leather electrically adjustable seats (front), Matte Grey interior finishing, chrome metallic badge
P205	2,9	Special Paint two colours
P208		Flight Stream 510 Garmin
P209		Fuselage Cover
P210	1,5	Metallic paint, (requires option P205)
P211		Disassembling and packing in one 40 ft container
P212	3	Aviation Oxygen System, Portable for 4 people

### Standard



#### St1 — Colour Stripes



#### St2 — Colour Stripes



#### St3 — Colour Stripes



#### St4 — Colour Stripes



### Special Paints

SP-4



SP-1



SP-2



SP-3



#### A — Paint — Stripes



#### B — Paint — Stripes



#### C — Paint — Stripes





Pascale Museum at Tecnam Headquarters Capua

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