

P2006T



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COSTRUZIONI AERONAUTICHE
TECNAM

P2006-Twin

Specification & Description

This project is based on the revolutionary, new aircraft engine the Rotax 912S, specifically designed to incorporate the latest technologies developed by the automotive industry. The Rotax 912S is FAR 33 certified and is currently the only aircraft engine approved to utilise automotive fuel, giving it a significant edge over standard GA engines. Some of the benefits include:

- Reduced frontal area and Better power-to-weight ratio
- Lower fuel consumption
- Lower propeller rpm resulting in higher efficiency and lower acoustic profile
- Stable cylinder head temperatures due to liquid cooling

To date, this modern aircraft power plant has been used successfully in two-seat aircraft, its relatively low power capacity (rated at 73 kW/100 hp) making it a popular choice in the aviation industry. It has become increasingly evident, therefore, that a potential market exists for a *four*-seat aircraft powered by *two* of these Rotax engines, with very little weight disadvantage. The result is the **P2006T**.

This twin-engine formula offers higher safety and lower operating costs than its single engine counterparts. Extensive research for this project has proven that the light twin-engine aircraft will have a lower standard empty weight than comparable single-engine four-seat aircraft in the 180 hp or 200 hp class. The **Tecnam P2006T** also offers better performance, greater cabin comfort and, due to its unique ability to use automotive fuel, much lower operating costs.

For the sake of comparison, the Lycoming O-360-A1A 180 hp weighs 146kg and has a frontal area of 0.4 m2, while the Rotax 912S (with the same accessories) weighs only 64kg and has a reduced frontal area of just 0.15 m2. The Lycoming generates its maximum power of 2700 rpm at the propeller and the Rotax at 2400 rpm.

The **Tecnam P2006T** is a twin-engine four-seat aircraft with fully retracting landing gear. The superior high-wing configuration offers stability, superior cabin visibility and easy access for passengers and luggage.

Tecnam has used its extensive experience with aluminium airframes to create in the **Tecnam P2006T** a robust yet very light airframe, resulting in an outstanding payload-to-total-weight ratio.

Wings are of traditional construction, essentially mono spar configuration. Integral fuel tanks are located outboard of the engines holding 100 litres each for a total of 200 litres.

A laminar NACA63A airfoil of moderate thickness has been selected for the semi-tapered wing planform. This offers low drag and good high altitude behaviour.

Wide slot aluminium flaps, electrically controlled, allow stall speeds lower than 48 kts. These flaps offer potential for very steep approaches and short landings.

Frise ailerons allow aggressive roll rates with minimal adverse yaw. Aileron control is via internal cabin cable linked to push-rods in the wing leading edges.

Particular attention was paid to the cabin's structural design in order to ensure the required crashworthiness prescribed in recent amendments to the FAA-FAR23 and EASA-CS23 codes. Fuselage structure, seats and seatbelts combine to protect occupants in case of a hard landing. The **Tecnam P2006T**'s conformity to such safety requirements has been proven during dynamic tests (reaching forward load factors up to 26g) carried out by a certified laboratory.

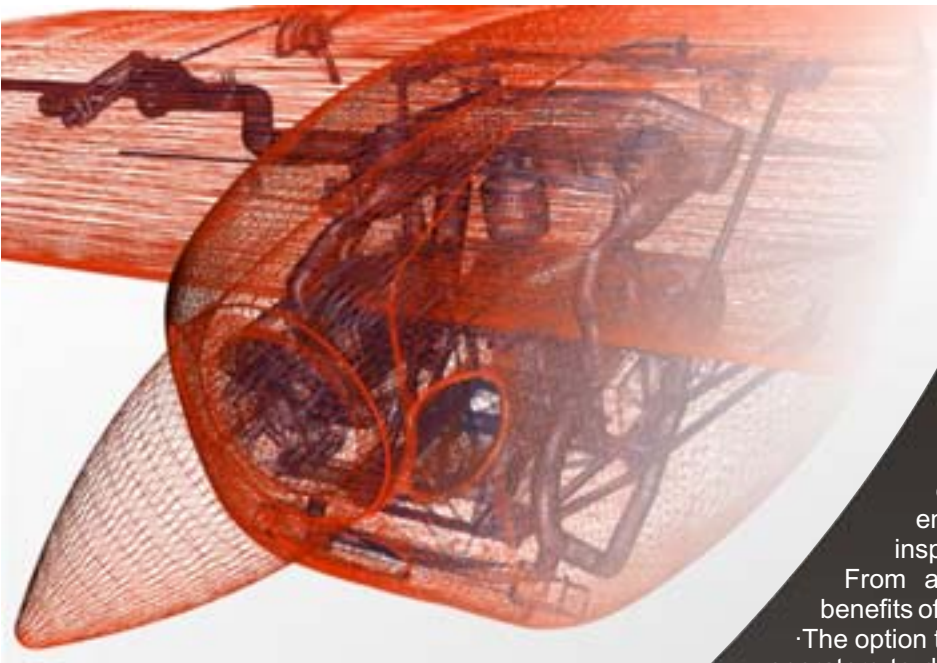
The horizontal tail is an all-moving type, designed for remarkable longitudinal control-free stability and excellent control authority. A wide trim-tab, part of the stabilator trailing edge, doubles as an anti-tab device.

The cable-type pitch trim is controlled by a wheel located between the pilots' seats and is fitted with a position indicator.

As with most of the aircraft body, the horizontal stabilator and the vertical fins are metallic. The rudder features an electronically controlled trim-tab with a position indicator situated on the instrument panel.

Wing:		ft	m
_ Wing Span		32,3	10,6
		sq ft	sq m
_ Wing Area		155,0	14,4
Fuselage:		ft	m
_ Length		26,4	8,66
_ Height		8,7	2,85
Cabin		in	m
_ Width		47,2	1,20
_ Lenght		102,0	2,60





ENGINE

The **Tecnam P2006T** is equipped with **two** four-cylinder four-stroke Rotax 912S engines of 100hp (73kW) each. These are liquid cooled with an integrated reduction gear (1:2.4286) driving constant speed propellers with pitch feathering devices. Engine mounts are made of high strength Cr-Mo Steel tubes with engine vibration isolators. Very easy and convenient access to the engine compartment allows for fast daily inspections.

From an operational point of view, the following benefits of the **Tecnam P2006T** should be stressed:

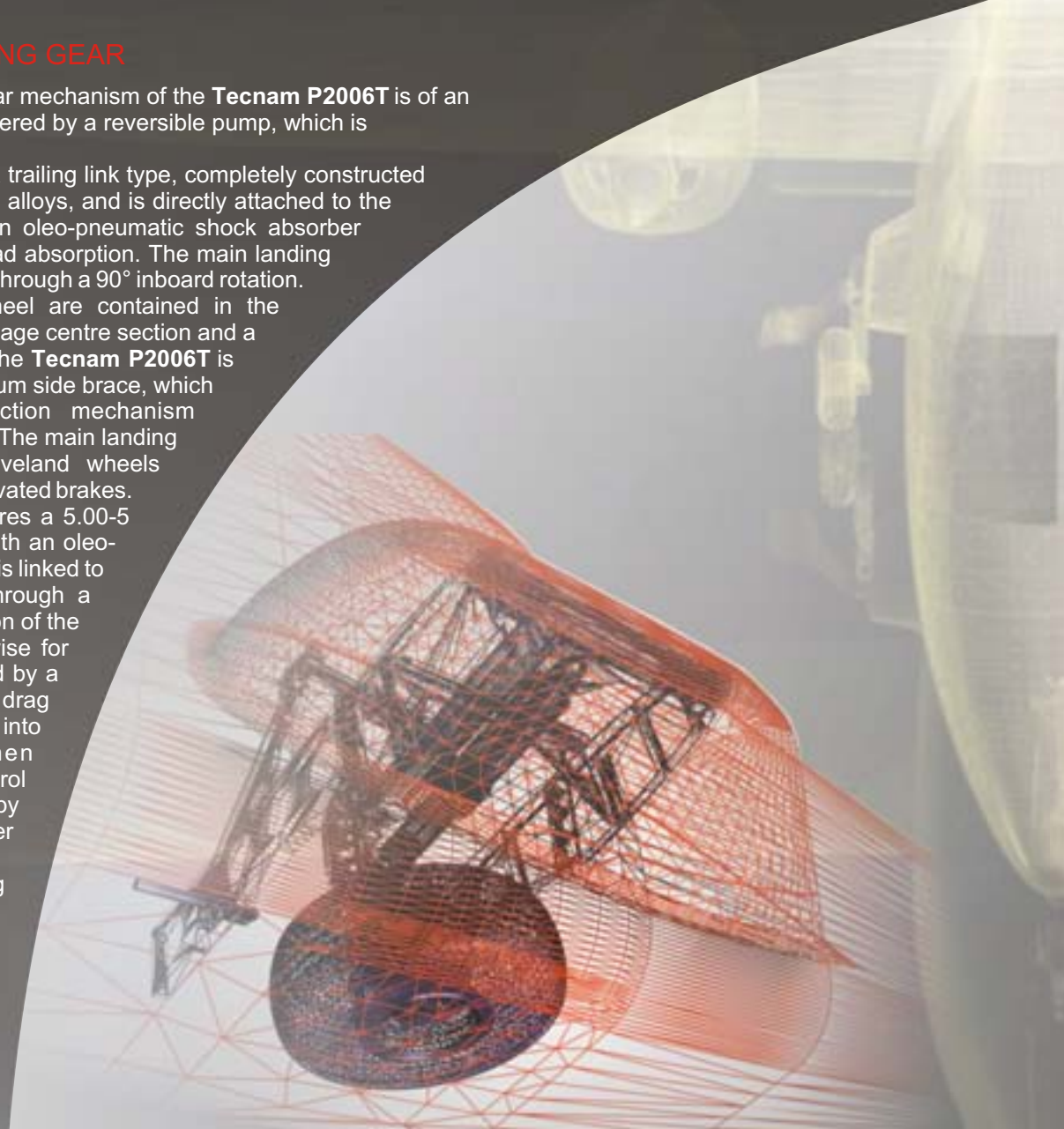
- The option to use either automotive fuel or AVGAS allows operators to dramatically reduce the direct costs, making it possible to fly to locations where AVGAS is difficult to obtain or prohibitively expensive.
- The twin-engine configuration of the **Tecnam P2006T** is extremely dependable, enabling the aircraft to travel long over water distances or over rough terrain.
- The fuel system features two fuel tanks integral with the wings box for a total capacity of 200 litres. Each engine is equipped with a mechanically driven fuel pump and an electric backup pump.
- Tank selection and cross feeding are controlled by two valves positioned overhead

LANDING GEAR

The retractable landing gear mechanism of the **Tecnam P2006T** is of an electro-hydraulic type, powered by a reversible pump, which is electrically controlled.

The main landing gear is of a trailing link type, completely constructed from high strength aluminium alloys, and is directly attached to the fuselage main bulkheads. An oleo-pneumatic shock absorber provides excellent ground load absorption. The main landing gear retraction is very simple through a 90° inboard rotation. The gear strut and the wheel are contained in the retracted position by the fuselage centre section and a side pod. The main gear of the **Tecnam P2006T** is held in position by an aluminium side brace, which also serves as the retraction mechanism operated by a hydraulic ram. The main landing gear is equipped with Cleveland wheels (6.00-6) and rudder pedal activated brakes. The nose landing gear features a 5.00-5 wheel and telescopic strut with an oleo-pneumatic shock absorber. It is linked to the cabin's first bulkhead through a steel truss. The gear extension of the **Tecnam P2006T** is speed-wise for higher safety and is operated by a hydraulic ram through the drag brace, which in turn locks it into the down position. When extended, the steering control on the nose gear is actuated by push-rods linked to the rudder pedals.

A system of lights and warning horn informs the pilot of the status of the landing gear's extended/retracted position. A back-up extension system, assisted by gravity, ensures landing gear extension even in the event of main system failure.



The following table compares the performance of various other four-seat, 200hp aircraft available on the market today.

It is evident that:
For the first time ever it is possible to compare **twin-engine** four-seat aircraft to **single-engine** four-seat aircraft due to their similar weight and power specifications.

The **Tecnam P2006T**'s empty weight is the lowest among its direct competitors, while the payload is higher. This can be attributed to the high structural and systems efficiency and because of the excellent weight-to-power ratio of the Rotax engine. The wing-mounted engines relieve the aerodynamic load on the wing with a consequently lighter structure.

The remarkable propulsive efficiency of the **Tecnam P2006T** is attributable to the low propeller rotating speed and the low engine drag. These, together with a streamlined fuselage, result in uncommonly efficient aerodynamics. The **Tecnam P2006T** clearly boasts the highest ceiling and climb speed among its competitors.

From an operating point of view, the following points are worth considering:

- The option to use automotive fuel as well as AVGAS allows **Tecnam P2006T** operators to dramatically reduce direct costs, making it possible to fly in regional or remote areas where AVGAS is difficult to find or prohibitively expensive.
- The dependable twin-engine configuration of the **Tecnam P2006T** allows it to be flown over long distances and in areas where ground facilities are poor.

Comparative table of four seats, general aviation aircraft (Official data)

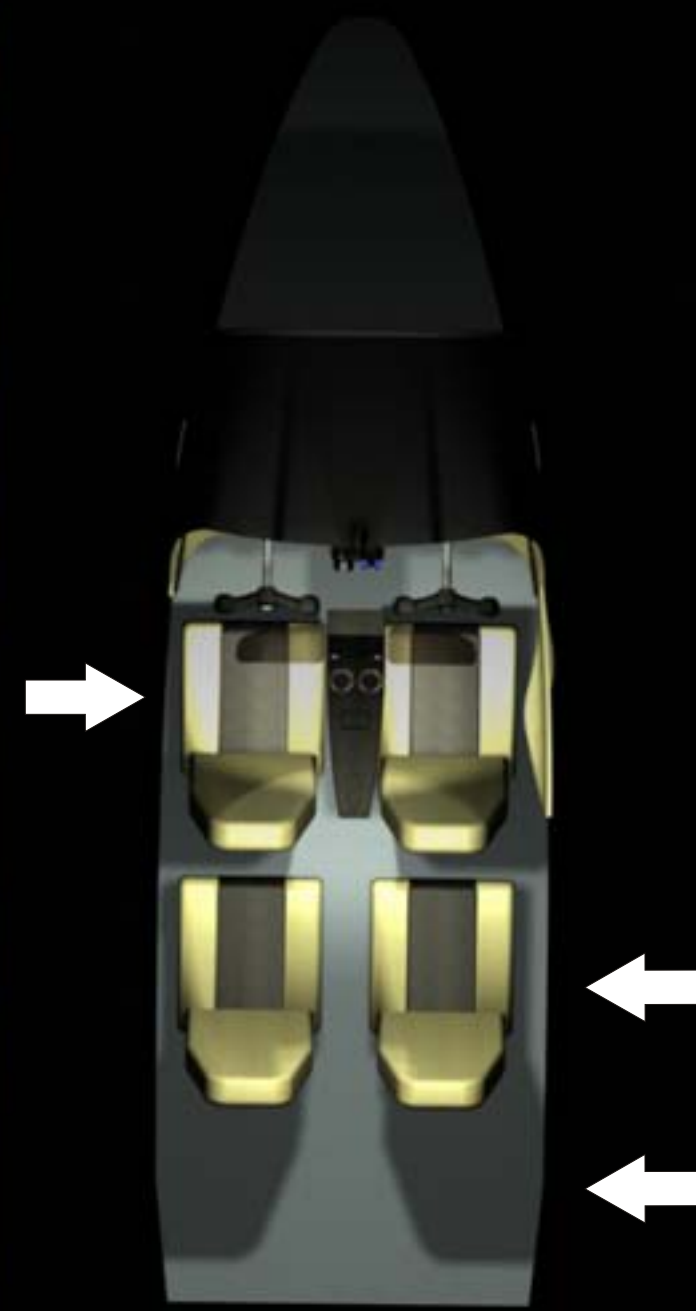
MODEL	Cessna 172R	Piper PA28-181	Cirrus	Diamond	Piper PA28RT-201T	Piper PA-44-180	TECNAM
Specifications	Skyhawk	Archer	SRV-G2	DA-40	Arrow	Seminole	P2006T Ve It
Wingspan	<i>m</i>	10,97	10,80	10,84	12,00	11,80	10,60
Wing area	<i>sqm</i>	16,20	16,00	12,50	13,47	15,80	14,40
Lenght	<i>m</i>	8,28	7,32	7,92	8,02	7,50	8,66
Height	<i>"</i>	2,72	2,20	2,59	1,98	2,38	2,85
Cabin width	<i>"</i>	1,00	1,06	1,24	1,14	1,04	1,14
Cabin lenght	<i>"</i>	3,60	2,49	3,30	n.a.	n.a.	2,60
Landing gear type	<i>"</i>	Fkcd, tricycle	Fkcd, tricycle	Fkcd, tricycle	Fkcd, tricycle	Retractable tricycle	Retractable tricycle
Engine							
Manufacturer	Lycoming	Lycoming	Continental	Lycoming	Lycoming	Lycoming	Rotax
Model	IO-360-L2A	O-360-A4M	IO-360-ES	O-360-M1A	IO-360-C1C6	2 x O-360-A1H6	2x 912 S
Horsepower	160 hp	180 hp	200 hp	180 hp	200 hp	2 x 180 hp	2 x 98 hp
	@ 2400 RPM	@ 2700 RPM	@ 2600 RPM	@ 2700 RPM	@ 2700 RPM	@ 2700 RPM	@ 2400 RPM
Propeller							
Type	Fixed Pitch	Fixed Pitch	Const. speed, 2 blade	Const. speed, 2 blade	Const. speed, 2 blade	Const. speed, 2 blade	Const. speed, 2 blade
	2 blade	2 blade	2 blade	2 blade	2 blade	2 blade	2 blade
Diameter	<i>m</i>	1,91	n.a.	1,93	1,8	n.a.	1,72
Design weight & Loading							
Max. gross weight	<i>kg</i>	1043	1157	1360	1149	1248	1100
Std. empty weight	<i>"</i>	588	760	929	744	812	640
Useful load	<i>"</i>	455	397	431	405	435	460
Seating capacity		4	4	4	4	4	4
Fuel capacity	<i>liters</i>	159	182	213	148	260	190
Wing loading	<i>kg/sqm</i>	64,4	72,3	108,8	85,3	79	76,5
Power loading	<i>kg/hp</i>	6,52	6,43	6,8	6,38	6,24	5,50
Performance							
Max. level speed s.l.	<i>KTS</i>	123	133	n.a.	n.a.	n.a.	168
Cruise speed	<i>"</i>	122 (80%,8000 ft)	128 (75%,7900 ft)	150 (75%)	145 (75%,6500 ft)	137 (75%, 6000ft)	162
	<i>"</i>	116 (10000 ft)	n.a.	n.a.	134 (65%,10000ft)	n.a.	141 (65%,9000 ft)
Stall speed, flaps up	<i>KTS</i>	51	n.a.	54	52	60	n.a.
Stall speed, flaps down	<i>"</i>	47	52	n.a.	49	55	n.a.
Best rate of climb	<i>ft/m</i>	720	n.a.	900	1070	831	1200
Service ceiling	<i>ft</i>	13500	14100	n.a.	15000	16200	17100
Cruise range, reserve (30')	<i>nm</i>	580	487	634	n.a.	n.a.	n.a.
Takeoff, ground roll	<i>m</i>	288	348	409	219	n.a.	n.a.
Takeoff, distance (50 ft)	<i>"</i>	514	490	597	352	525	671
Landing ground roll	<i>"</i>	168	280	309	146	n.a.	n.a.
Landing distance (50 ft)	<i>"</i>	395	427	622	314	498	454

INTERIORS & EXTERIORS



The generous interior dimensions of the **Tecnam P2006T** allow maximum space for pilots and passengers alike. With its two doors, its upholstered seats complete with headrests and vertical adjustment, the cabin provides great flexibility for pilots of varying physical stature to optimise their comfort. Each seat is provided with three-point seat belts with inertia reel and the two Pilots' seats are equipped with a central armrest. Specific care has been given to cabin interiors and acoustic comfort.

The ventilation system features one vent outlet for each occupant. The heating system uniformly warms the cabin and a defrost manifold prevents the windshield from fogging even while taxiing. Wide and appropriate windows, together with the high wings, provide excellent visibility for a very pleasant flight, as well as for safe ground operations. The cabin has a spacious luggage compartment of 350 litres, which is easily accessible from an external door.



AVIONICS

GLASS COCKPIT

FULL IFR ANALOGUE CONFIGURATION

Standard ANALOGUE CONFIGURATION

A wide instrument panel has been specifically designed to be fitted with a full optional instrumentation up to a full IFR configuration and with glass cockpit instruments.

The Glass cockpit offers easy-to-read graphical views of key flight indicators such as attitude display and speed.

Not only does the new system improve crew/aircraft interaction with easy-to-read graphics but it also reduces the high cost of maintaining obsolete systems.

PRICING & SPECIFICATION

P2006 T SPECIFICATIONS

DESIGN WEIGHT & LOADING				
Maximum Take-off weight	2425	lb	1100	kg
Maximum Ramp Weight	2425		1100	
Standard Equipped weight	1411		640	
Standard Useful Load	1014		460	
Baggage Allowance	132		60	
DIMENSION				
Wing Span	34,8	ft	10,6	m
Wing Area	155,0	sq ft	14,4	sqm
Fuselage lenght	28,4	ft	8,66	m
Fuselage height	9,4		2,85	
Cabin width	47,2	in	1,20	
Cabin lenght	8,2	ft	2,5	
ENGINE				
Manufacturer		ROTAX		
Model	912S			
Number of cylinder	4			
Take-off performance	73,5	kW	98	hp
Max continuous performance	69		92	
Gearbox reduction ratio		2,43:1		
PROPELLER				
Manufacturer		HOFFMANN		
Type	Variable pitch propeller feathering			
Number of Blades	2			
model	HO-V352			
PERFORMANCE				
Max speed at sea level	153	Kts	283	km/h
Cruise speed (75%, 7000ft)	147		272	
Cruise speed (65%, 9000ft)	141		261	
Stall speed flap up	53,5		99	
Stall speed flap down	48		89	
Climb rate, s. l.	1360	ft/min	6,9	m/s
Climb rate, s. l. (single engine)	380		1,9	
Range to 75%, 30' reserve	610	n.m.	1130	Km
Range to 65%, 30' reserve	710		1315	
Service ceiling (twin engine)	16007	ft	4880	m
Service ceiling (single engine)	6690		2040	
Takeoff roll	738		225	
Takeoff (50' obstacle)	1378		420	
Landing roll	591		180	
Landing (50' obstacle)	1115		340	

P2006 T STANDARD EQUIPMENT

FLIGHT INSTRUMENTS and INDICATORS
1 MAGNETIC COMPASS
2 AIRSPEED IND., Kts
3 ALTIMETER DUAL MODE (IN/Mb)
4 VERTICAL SPEED
5 DIRECTIONAL ELECTRIC
6 ATTITUDE HORIZON ELECTRIC
7 TURN AND BANK INDICATOR
8 O.A.T.
9 PITOT SYSTEM HEATED
10 STATIC SYSTEM
11 ALTERNATE STATIC SOURCE
12 STALL WARNING AUDIBLE
13 LANDING GEAR POSITION LIGHT THREE
14 LANDING GEAR-in-TRANSIT/NOT LOCKED LIGHT
15 STABILATOR TRIM POSITION INDICATOR
16 RUDDER TRIM POSITION INDICATOR

ENGINE INSTRUMENTS
1 TACHOMETER + HOUR RECORDER, DUAL
2 MANIFOLD, DUAL
3 FUEL FLOW, DUAL
4 EGT, DUAL
5 OIL PRESS, TWO
6 OIL TEMP., TWO
7 HEAD TEMP., TWO
8 FUEL PRESS., TWO
9 AMMETER
10 VOLTMETER
11 LH + RH FUEL QTY
12 ANNUNCIATOR PANEL LIGHTED PUSH TO TEST:
_ LH LOW FUEL
_ RH LOW FUEL
_ LH LOW OIL PRESS
_ RH LOW OIL PRESS
_ LH LOW VOLTAGE
_ RH LOW VOLTAGE
_ PILOT DOOR OPEN

FLIGHT CONTROLS
1 HYDRAULIC BRAKES
2 PARKING BRAKE
3 ELECTRICAL FLAPS
4 DUAL FLIGHT CONTROLS
5 STEERABLE NOSE WHEEL
6 AILERON AND ELEVATOR LOCK
7 STABILATOR TRIM (MANUAL)
8 ENGINE CONTROLS
_ THROTTLE, TWO
_ PROPELLERS, TWO
_ CARBURETTOR HEAT, TWO
_ CHOKE, TWO
9 FLIGHT TRIM CONTROLS
_ RUDDER with INDICATOR
_ STABILATOR with INDICATOR
10 LANDING GEAR, RETRACTABLE ELECTRO-HYDRAULIC
11 LANDING GEAR SELECTOR SWITCH
12 LANDING GEAR WARNING HORN
13 LANDING GEAR EMERGENCY EXTENSION
14 FUEL CONTROL SELECTOR WITH ON/OFF CROSSFEED
15 OVERHEAD PANEL SWITCHES:
_ STARTER LH and RH
_ FUEL PUMP LH and
_ LEFT ENGINE LH and RH IGNITION SWITCHES
_ RIGHT ENGINE LH and RH IGNITION SWITCHES

ELECTRICAL SYSTEM
1 12 VOLT 35 Ah GILL 35A
2 12 VOLT ALTERNATORS-21 AMP., TWO
3 ROCKER SWITCHES INTERNALLY LIGHTED
_ Master Switch
_ Landing Light
_ Taxi Light
_ Navigation Lights
_ Strobe Light
_ Pitot Heat
_ Map Light
4 EXTERNAL POWER SUPPLY RECEPTABLE
5 CIRCUIT BREAKER PANEL
6 STATIC DISCHARGE WICKS

FUEL SYSTEM
1 TWO INTEGRAL FUEL TANKS WITH 200 LITRES TOTAL CAPACITY
2 ENGINE DRIVEN FUEL PUMPS, TWO
3 AUXILIARY FUEL PUMPS, ELECTRIC, TWO
4 FUEL TANK QUICK DRAIN , TWO
5 2 X SHUT OFF VALVES WITH CROSS FEED

INTERIOR
1 PILOT and COPILOT SEATS Simulated leather
_ Adjustable Fore and Aft
_ Vertical Adjustment
_ Arm Rest
2 TWO REAR PASSENGER SEAT S
3 SEAT BELTS & Shoulder Harness, All Seats
4 WALL TO WALL CARPETING
5 FIRE EXTINGUISHER
6 MAP & STORAGE POCKETS
7 RADIO CALL PLATE
8 SUN VISOR, Pilot/Copilot
9 TOW BAR
10 SOUNDPROOFING
11 LUGGAGE COMPARTMENTS
12 OVERHEAD COCKPIT SPEAKER
13 FOUR POSITION INTERCOM SYSTEM
14 FIRST AID KIT

INTERIOR LIGHTING
1 AVIONICS INSTRUMENT internally lighted
2 AVIONICS RADIOS internally lighted
3 ENGINE INSTRUMENTS internally lighted
4 FLIGHT INSTRUMENTS internally lighted
5 COMPASS internally lighted
6 INTERIORS LIGHT DIMMING CONTROL
7 MAP LIGHT
8 PEDESTAL LIGHTING

EXTERIOR
1 EPOXY CORROSION PROOFING, All structure
2 LH FRONT DOOR Pilot/Copilot, Lock and Key
3 RH REAR DOOR Passenger
4 BAGGAGE DOOR, w/Lock and Key
5 REAR WINDOW
6 ALL WINDOWS TINTED
7 RETRACTABLE LANDING GEAR
8 TIE DOWN RINGS
9 MAIN WHEELS, 6,00 X 6
10 NOSE WHEEL, 5,00 X 5

EXTERIOR LIGHTS
1 NAVIGATION LH/RH wing tip and vertical tail
2 VERTICAL TAIL STROBE
3 LANDING/TAXI LIGHT

CABIN COMFORT SYSTEM
1 WINDSHIELD DEFROSTER
2 VENTILATOR ADJUSTABLE, 4 place
3 HEATING SYSTEM

POWERPLANT AND PROPELLER
1 ENGINES - 2 ROTAX 912S3 100 HP, 4 Cylinders liquid/air cooled, integrated reduction gear
2 DUAL IGNITION SYSTEM
3 THROTTLE CONTROL LH/RH
4 TUBULAR STEEL ENGINE MOUNT
5 PROPELLERS - 2 HOFFMANN, 2 Blade, Constant Speed
6 PROPELLER SPINNER, TWO
7 PROPELLER CONTROL LH/RH
8 AIR FILTER, TWO
9 OIL FILTER, TWO
10 OIL AND WATER COOLERS, TWO
11 CARBURETTOR HEAT with Manual Control

PRODUCT SUPPORT/DOCUMENTS
1 MANUFACTURER'S FULL TWO YEAR LIMITED WARRANTY
2 PILOT'S OPERATION HANDBOOK
3 MAINTENANCE MANUAL
4 PARTS CATALOG
5 AIRCRAFT LOG BOOK

STANDARD GARMIN AVIONICS PACKAGE
1 GNS430 COMM/NAV/GPS Multifunction Display
2 GI-106A CVOR/LOC/GS/GPS Indicator
3 GTX 327 TRANSPONDER
4 GMA 340 AUDIO PANEL
5 ALTITUDE ENCODER
6 AVIONICS MASTER SWITCH
7 MICROPHONE TELEX 100T
8 AVIONICS CIRCUIT BREAKER PANEL
9 PILOT and CO-PILOT PTT
10 ELT

STANDARD EQUIPMENT Retail price € 235.000,00*

* ex Naples - Italy + freight, local assembly, delivery and local certification costs.

OPTIONAL EQUIPMENT	Euro
101 S-TEC AUTOPILOT SYSTEM 55X DUAL AXIS with Automatic Electric Trim, Turn Coordinator (exchange for Std TC) and DG with Heading Bug (exchange for Std DG)	20.500,00
102 ST-360 ALTITUDE SELECTOR ALERTER (Only available with Opyion 101)	3.950,00
103 ELECTRIC TRIM (S-TEC)	4.100,00
104 ST-361 Flight Director (Requires option 101, exchange with Std Horizon)	7.970,00
105 KCS55A HSI Slaved Compass System (Requires option 101, exchange for DG with Heading Bug)	9.970,00
106 2nd GNS 430 with GI 106A	11.700,00
107 2nd Airspeed Indicator	820,00
108 2nd Attitude Horizon electric	1.250,00
109 2nd Altimeter	820,00
110 GTX 330 Mode S Transponder (Exchange with GTX 327)	2.000,00
111 GNS 530 COMM/NAV/GPS (exchange for GNS 430)	3.000,00
112 ADF - KING KR87 with KI 227 Indicator	5.416,00
113 DME - KING KN63	8.250,00
114 PEGASUS Fully Integrated EFIS System presented on two 10.4" high resolution XGA displays (PFD/MFD) Attitude Heading Reference System (AHRS) Air Data Computer (ADC) Engine/Airframe Indication and Crew AlertingSystem (EICAS) Dual Nav/Comm IFR Enroute/Approach Certified andWAAS/GPS Receiver Fully Integrated Mode S Transponder Digital Audio Panel	35.000,00