ENGINEERING PREVIEW · 2026

VIRTUAL-FLY / PRELIMINARY PREVIEW

SOLO PRO DA42

Diamond DA42 Twin Star · Engineering Preview, Not Yet in Production

Twin-engine G1000 NXi mastery, built on the proven SOLO PRO platform.

FAA-CERTIFIABLE AATD, IN DEVELOPMENT

Twin-engine G1000 NXi. Purpose-built for the DA42.

The SOLO PRO DA42 replicates the Diamond DA42 Twin Star cockpit with a DA42-specific panel, sub-panel, and pedestal — not adapted from another platform. Every switch, lever, and indicator shown here will be present in the delivered unit.

01

Twin-engine G1000 NXi

Full G2Cockpit NXi suite tuned specifically to the DA42 — Austro AE300 parameters, ECU status, fuel system, and electrical bus indications.

02

Built on the proven SOLO PRO platform

Same frame, screens, and seat as the SOLO PRO D4 — only the panel, sub-panel, and pedestal are DA42-specific.

03

225° visual system

Three 55-inch 4K displays for a 225-degree field of view, angled to place the runway picture where the pilot expects it in the flare.

COCKPIT — ENGINEERING LAYOUT

Every switch, engineered for the DA42.

Numbered zones on the 2D engineering layout, each modelled as physical hardware in the renders.

01

Engine, electrical & gear

ECU voter and test per engine, engine masters with locking mechanism, 3-position engine start, electrical/avionics master, and a 2-position gear lever with unsafe / nose / left / right LEDs.

02

Fuel & flaps

Independent LH/RH fuel pumps and circuit breakers, plus a 3-position flap selector with UP / T-O / LDG position LEDs.

03

Emergency & alternate systems

A guarded emergency gear extension lever, an alternate air lever, and an optional de-ice control panel (MAX / HIGH / NORM, windshield, pumps).

GARMIN G1000 NXI

Full twin-engine configuration.

- **DA42-specific EIS**
  Dual load %, independent LH/RH RPM, twin fuel flow, oil temp/pressure, coolant temp, and fuel temp — specific to the Austro AE300 installation.
- **Full SVT synthetic vision**
  Terrain and obstacle rendering, HSI with inset map, DA42 V-speed markings, and reversionary mode for display-failure training.
- **GFC 700 autopilot**
  RNAV-capable autopilot with all modes, including VNAV descents, and AP DISC on the stick.

G1000 NXi MFD · twin-engine EIS (render)

SECTION 02 — FIDELITY

Engineered against the real DA42 Twin Star.

The SOLO PRO DA42 is built against this real aircraft cockpit (OE-FTF) — G1000 NXi suite, twin-engine ECU panel, fuel selectors, and retractable gear controls, all reproduced as physical hardware matching the actual DA42 Twin Star.

FLIGHT CONTROLS

Every control matches the real aircraft.

STICK

DA42 replica stick

AP DISC and pitch trim switches in the correct position, sized and shaped to the DA42's actual control stick.

POWER LEVERS

Independent power levers

Two independent levers with linear travel and no detents, plus a GO-AROUND button on the left lever.

RUDDO+

Rudder pedals w/ diff. brakes

Load-cell differential brakes for authentic rudder and braking feel.

INSTRUCTOR STATION

Nearly every failure, on demand.

Software: FS-FlightControl, interfaced through a standard API — position, weather, time, and failure scenarios, combined with airframe failures.

01

Engine & ECU failures

Engine-out, ECU voter faults, and gear malfunctions triggered from a remote instructor station mid-approach.

02

Reversionary & display failures

Single-display failure drills with reversionary mode support on the PFD/MFD.

03

Traffic scenario integration

Optional integration with traffic scenario generation to display alerts and intruders on PFD and MFD.

REGULATORY

AATD CERTIFICATION PATHWAY

Training credit & certification path.

The SOLO PRO DA42 follows Virtual-Fly's established FAA AATD certification pathway — the same process that produced the SOLO PRO D4 LOA currently in operation.

01

FAA Advanced Aviation Training Device

Certification under 14 CFR §61.1 and AC 61-136B. Loggable credit under Parts 61 and 141 per issued LOA, once certified.

02

Instrument proficiency & currency

With an AATD LOA authorising IPC, pilots complete instrument proficiency checks and maintain 6-month currency without leaving the ground.

03

Multi-engine emergency procedures

Engine-out identification, dead-engine shutdown, and single-engine approaches at full fidelity — no aircraft risk, fully repeatable.

AATD certification subject to FAA evaluation of the final device configuration and issued LOA. Consult Virtual-Fly for current scope and timeline.

TECHNICAL SPECIFICATIONS

Platform & hardware.

01

Structure & ergonomics

Steel and powder-coated aluminium frame; single seat with adjustable height and fore/aft travel; closed-cabin enclosure available as an option.

02

Visual & simulation

Three 55-inch 4K displays, 225° horizontal field of view, running on X-Plane 12.

03

Warranty

36-month warranty, matching the rest of the SOLO PRO range.

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Ready to discuss your DA42 training programme?

Currently in development

Engineering renders shown are subject to minor changes prior to production. Not for public distribution.

FAA AATD certification pathway

Follows the same process that produced the SOLO PRO D4 LOA currently in operation.

36-month warranty

Matching the rest of the SOLO PRO range, once delivered.

Contact Virtual-Fly for full technical specifications, pricing, or delivery timeline.

Cristian Sánchez · Sales Manager
csanchez@virtual-fly.com · (+34) 606 376 723