

UAS Propulsion & Flight-Readiness Bench

CAPABILITY SHEET - THRUST STAND, 3-DOF RIG & READINESS BENCH - ENGINEERED TO ORDER

THE SYSTEM

WHAT	The ground-test bench set that makes a drone ready to fly: a propulsion thrust stand, a 3-DOF attitude rig and a system-integration and readiness bench.
OUR ROLE	Neometrix builds the bench and rig structures, gimbal mechanics, safety cages, fixturing and DAQ integration, and calibrates every measurement chain.
STATUS	Engineered to order; quoted across UAS integration-test and attitude-rig requirements. No specific delivered bench is claimed on this sheet.

THE BENCHES

THRUST STAND	Motor, propeller and ESC characterised together - thrust, torque, RPM, electrical power, temperatures - giving efficiency in g/W, the thrust map and endurance.
3-DOF RIG	A gimballed fixture frees roll, pitch and yaw while holding position, so the flight controller is brought up, tuned and provoked without free flight.
READINESS BENCH	The full aircraft restrained on a hold-down cradle: run-up, actuation and sensor checks, electrical load and endurance soak - the recorded pre-flight gate.

WHY BENCH FIRST

FLIGHT TIME	The powertrain turns watts into grams of thrust, and its efficiency sets the flight time - a few percent found on the stand is minutes kept in the air.
TUNE SAFELY	Controller mistakes that cost airframes in free flight end as a wobble on the gimbal - seen, logged and tuned out, with the next iteration minutes away.
THE GATE	Readiness is a documented state, not an opinion: every check instrumented and recorded, so first flight confirms what the bench already proved.

DISTINCT & HONEST

THE AIRCRAFT IS YOURS	The drone, motors, propellers and flight controller are customer-furnished - the benches measure them, as our mast elevates the customer's payload.
OUR FRANCHISE	The engine-dyno and test-bench house sized for UAS - structures, cages, fixturing, DAQ ours; load cells, torque transducers and analysers bought-in.
ENGAGEMENT	Send the aircraft class, the envelope and the tests to sales@neometrixgroup.com for a clause-by-clause compliance matrix in two working days.

DEFENCE PROGRAMMES DESK

sales@neometrixgroup.com · +91 7777 876 876 · neometrixgroup.com

Neometrix Defence Limited · E-148, Sector 63, Noida, Uttar Pradesh, India