

STAVATTI[®]

SM-31A STILETTO



UNDERGRADUATE JET TRAINING SYSTEM

SM-31A STILETTO

Performance & Specifications

FLYAWAY COST: \$20 Million Typical Flyaway

AVAILABILITY: TBD

TYPE

Undergraduate Jet Training System (UJTS) and Advanced Supersonic Trainer (ST)

ACCOMMODATION

Flight Crew of Two Seated in Tandem on Martin Baker MK18 Zero-Zero or Raytheon Technologies ACES V Ejection Seats

POWERPLANT

One (1) NeoThrust E450-NT-100 Afterburning Turbofan delivering 10,000 lbs st with Afterburner and 6,325 lbs st at Military Power. The powerplant is fitted with variable geometry, thrust vectoring and reversing 2D nozzle.

STRUCTURE

Semi-monocoque aluminum lithium and aluminum honeycomb sandwich construction throughout. Titanium used in high fatigue areas and high temperature regions. Extensive use of Laser and Friction Stir Welding in all assemblies.

ARMAMENT

Fixed: None

Expendable: Internal Weapons Bay and six external wing hardpoints for up to 1,100 lbs of external stores

DIMENSIONS

Wingspan	24 ft 0 in	Wing Area	176 sq ft
Length Overall	41 ft 8 in	Wheelbase	15 ft 8 in
Height Overall	9 ft 0 in	Wheeltrack	10 ft 8 in

WEIGHTS & CAPACITIES

Empty Weight	7,100 lbs	Wing Loading @ MMW (lbs/sq ft)	54.5
Max Internal Fuel	3,800 lbs	Thrust-to-Weight @ MMW	1.04
Max Warload	1,100 lbs	Wing Loading @ MTOW (lbs/sq ft)	71.0
Mid-Mission Weight (MMW)	9,600 lbs	Thrust-to-Weight @ MTOW	0.80
Max Take-Off Weight (MTOW)	12,500 lbs	Positive Load Limit @ MTOW	9.0

PERFORMANCE

Max Level Speed @ SL	1.00 Mach	Max Climb Rate @ SL; MTOW	26,591 ft/min
Max Level Speed @ FL400	1.05 Mach	Max Climb Rate @ SL; MMW	35,679 ft/min
Max Cruise Speed @ SL	0.90 Mach	Dash Range @ 1.00 Mach	441 nm
Max Cruise Speed @ FL350	0.90 Mach	Dash Range @ 1.04 Mach	293 nm
Typical Cruise Speed @ SL	0.80 Mach	Cruise Range @ 0.80 Mach	1,343 nm
Typical Cruise Speed @ FL350	0.80 Mach	Air Superiority Radius, Internal Fuel	371 nm
Takeoff Speed; MTOW @ SL	140 Ktas	Ferry Range with External Tanks	2,271 nm
Stall Speed; MTOW @ SL	128 Ktas	Takeoff, Ground Roll @ SL-TTW	1,763 ft
Approach Speed; Landing Weight @ SL	114 Ktas	Takeoff over 50 ft @ SL-TTW	2,736 ft
Stall Speed; Landing Weight @ SL	99 Ktas	Landing, Ground Roll @ SL-TLW	1,997 ft
Service Ceiling Exceeds	55,000 ft	Landing over 50 ft @ SL-TLW	3,102 ft

