



## STAVATTI AEROSPACE BRIEFING



## **ABOUT STAVATTI**



# Stavatti Aerospace Ltd is a new aircraft manufacturer focused upon the design, production and support of next generation military and civil aircraft.

SM-150 2 Place Sportplane

SM-27 Machete Close Air Support

SM-28 Machete Close Air Support

SM-31 Stiletto Trainer & Light Fighter









SM-47 Super Machete
Air Defense Fighter

SM-100 STOL Medium Transport

SM-36 Stalma Multi-Role Fighter

SM-39 Razor Air Dominance Fighter









## LEADERSHIP TEAM





Chris Beskar President & CEO



Bill McEwen COO



Jeffrey A. Gongoll Secretary



John R. Simon CEO Stavatti Niagara, CSD & A Officer & Director



Norman Edwards
Director of
Finance



Richard E. Guild Director of Military Aerospace



Wendell Maddox Vice President DoD Marketing



Jeff Peer Director of Flight Testing



Adarsh Deepak Director of Aerosciences



Robert C. Sugarman Chief Scientist & Director



Stuart E. Cart Director of Innovation



Dimitriy Giebeler Executive VP



Steve Hargan Senior Strategic Advisor



Wyman Howard Director of Performance



Vlad Boryshpolov Director of Aviation Safety



Brian D. Colvin Vice President & Director of UAS



John Lu VP of Business Asia



Sergiy Tsikhotsky Director Of Stavatti Ukraine

## SITES & FACILITIES



- Stavatti Aerospace Ltd ("Stavatti") was founded in April 2014 in Eagan, Minnesota
- Stavatti was Reorganized as a Wyoming C Corporation in December 2019
- Stavatti acquired the Former USARC Facility (SNAPPER) at the Niagara Falls International Airport (KIAG) on 30 October 2020. Totalling 173,358 sq ft on 19.8 Acres this facility now serves as Stavatti Headquarters and Prototype Development Center.



## SM-27 MACHETE



The SM-27 Machete is a Next Generation Turboprop Attack and Close Air Support (CAS) aircraft. Heavily armored and with a 30mm cannon, the Machete series will provide a dedicated Close Air Support (CAS) aircraft, replacing A-1s, OV-10s, AT-6Bs, Super Tucanos and A-10s. Satisfying the need for a Future Close Air Support Aircraft, Prototype First Flight is Anticipated in 2021 followed by Production in 2023.

SM-27 Machete
Turboprop
Attack/Close Air Support



400 KTAS 8,000 lb Warload 870 nm Radius

\$15 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$2,563

## SM-27 MACHETE



#### **SM-27 MACHETE SPECIFICATIONS**

Aircraft: SM-27S/T Machete Unit Flyaway Cost: \$15,000,000

Manufacturer: Stavatti Aerospace Ltd

First Flight: 2021-2022

#### Accommodation

Crew Single (S) or Two Seat (T) Seating MK16 or MK18 Ejection Seats

#### Armament

Fixed Internal 1 x 30mm GAU-8/A Ammunition 1,000 rds External Hardpoints Max External Warload 8,000 lbs

#### **Powerplant**

Number Type Turboprop Model PW150 Derivative Manufacturer P&W Canada Max SHP 4,000 Prop Type Countra-Rotating Prop Diameter 120 in Number of Blades

### **Avionics & Electronic Warfare**

Vixen 500E or RACR Radar (opt) EO/IR (opt) MX-10D or MX-15D HUD CED. HMD or LiteHUD Comm AN/ARC-210 Gen V IFF AN/APX-125 TACR-16DL Data Link GPS/INS **FALCN** TACAN AN/ARN-153(V) RF ECM (opt) AN/ALQ-211A(V)4 MAWS (opt) AN/AAR-58 SPJ (opt) AN/ALQ-214(V)4/5 Chaff/Flare 14 x AN/ALE-47

#### Dimensions

Weights

Loadings

Wing Loading-TCW

Wing Loading-MTOW

Power Loading-TCW

Power Loading-MTOW

Design Load Factor-TCW

Design Load Factor-MTOW

Max Internal Fuel (JP-8)

Max External Warload

Typical Combat (TCW)

Max Take-Off (MTOW)

Empty

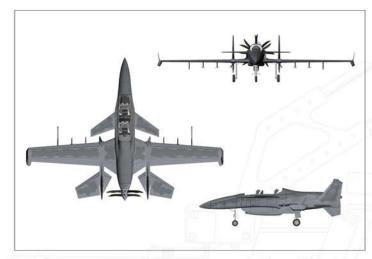
Max Wingspan 53 ft 0 in Max Length 38 ft 6 in Max Height 12 ft 11 in Wing Area 354 Wing Aspect Ratio 8.4 4.25° Wing LE Sweep

#### Performance

Max Level Speed @ SL 351 Ktas Max Level Speed @ FL200 401 Ktas Typical Cruise Speed @ SL 270 Ktas Typical Cruise Speed @ FL350 300 Ktas Typical Cruise Speed @ FL400 300 Ktas Takeoff Speed: MTOW 118 Ktas Stall Speed; MTOW 108 Ktas Approach Speed; TLW 84 Ktas Stall Speed; TLW 76 Ktas Max Climb Rate @ SL 4,275 ft/min Service Ceiling 45,000 ft Max Speed Range, IF 2.089 nm Max Speed Radius, IF 1,034 nm Typical Cruise Range, IF 2,534 nm Typical Cruise Radius, IF 1,214 nm Typical Cruise Ferry Range 3,803 nm Takeoff Ground Roll, TTW 1,995 ft Landing Ground Roll, TLW 480 ft

15,000 lbs 5,000 lbs 8,000 lbs 25,300 lbs 30,000 lbs 71.4 lbs/sq ft 84.2 lbs/sq ft 6.3 lbs/shp 7.5 lbs/shp +8.8/-4.4





## STAVATTI AEROSPACE

+7.5/-3.7

## SM-28 MACHETE



The SM-28 is a single engine non-afterburning turbofan powered Close Air Support and Lead-In Trainer. Armed with a 30mm cannon and able to carry 12,000 lbs of stores, the SM-28 has a maximum speed of over 0.90 Mach and a tactical radius of over 700 nm on internal fuel. Heavily armored, the SM-28 can replace A-10 and all other subsonic CAS aircraft with greater effectiveness, efficiency and survivability.

SM-28 Machete
Turbofan
Attack/Close Air Support



0.85+ Mach 12,000 lb Warload 700 nm Radius

\$20 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$3,385

## SM-28 MACHETE



#### **SM-28 MACHETE SPECIFICATIONS**

Aircraft: SM-27S/T Machete Unit Flyaway Cost: \$20,000,000

Manufacturer: Stavatti Aerospace Ltd

First Flight: 2022-2023

#### Accommodation

Crew Single (S) or Two Seat (T) Seating MK16 or MK18 Ejection Seats

#### Powerplant

Number 1
Type Non-Afterburning Turbofan
Model F414 Derivative
Manufacturer GEAE
Max Thrust (lbs) 14,756
Air Inlets Bifurcated Pitot Shock
Nozzle Fixed With Chevrons

#### Dimensions

 Max Wingspan
 53 ft 0 in

 Max Length
 38 ft 6 in

 Max Height
 12 ft 11 in

 Wing Area
 354

 Wing Aspect Ratio
 8.4

 Wing LE Sweep
 4.25°

#### Weights

 Empty
 16,000 lbs

 Max Internal Fuel (JP-8)
 6,000 lbs

 Max External Warload
 12,000 lbs

 Clean Takeoff (TPW)
 24,860 lbs

 Typical Combat (TCW)
 26,800 lbs

 Max Take-Off (MTOW)
 36,000 lbs

#### Loadings

 Wing Loading-TCW
 75.7 lbs/sq ft

 Wing Loading-MTOW
 101.7 lbs/sq ft

 Thrust-to-Weight-TCW
 0.55 to 1

 Thrust-to-Weight-MTOW
 0.41 to 1

 Design Load Factor-TCW
 +10.0/-5.0

 Design Load Factor-MTOW
 +7.5/-3.7

#### Armament

 Fixed Internal
 1 x 30mm GAU-8/A

 Ammunition
 1,000 rds

 External Hardpoints
 8

 Max External Warload
 8,000 lbs

#### **Avionics & Electronic Warfare**

Vixen 500E or RACR Radar (opt) EO/IR (opt) MX-10D or MX-15D HUD CED. HMD or LiteHUD Comm AN/ARC-210 Gen V IFF AN/APX-125 TACR-16DL Data Link GPS/INS **FALCN** AN/ARN-153(V) TACAN RF ECM (opt) AN/ALQ-211A(V)4 MAWS (opt) AN/AAR-58 SPJ (opt) AN/ALQ-214(V)4/5 Chaff/Flare 14 x AN/ALE-47

#### Performance

Max Level Speed @ SL 0.90 Mach Max Level Speed @ FL350 0.90 Mach Typical Cruise Speed @ SL 0.80 Mach Typical Cruise Speed @ FL100 0.80 Mach Typical Cruise Speed @ FL350 0.80 Mach Takeoff Speed: MTOW 130 Ktas Stall Speed; MTOW 118 Ktas Approach Speed; TLW 95 Ktas Stall Speed; TLW 79 Ktas Max Climb Rate @ SL 17,000 ft/min Service Ceiling 55,000 ft Max Speed Range, IF 1.067 nm Max Speed Radius, IF 518 nm 0.85 Mach Range, IF 1,394 nm 0.85 Mach Radius, IF 677 nm 0.85 Mach Ferry Range 3,830 nm +10.0/-5.0 Takeoff Ground Roll, TTW 1,765 ftt +7.5/-3.7 Landing Ground Roll, TLW 2.063 ft





## SM-150 SPORTPLANE



The SM-150 is a Next Generation two seat Sport Aircraft. Stylish and affordable, this advanced sportplane will introduce a new generation to aviation. A three-surface aircraft, the SM-150 has forward swept wings, canard foreplanes, twin V-tails and inverted vertical stabilizers. Constructed from advanced aluminum foam metal sandwich materials, the SM-150 will have an extremely low specific fuel consumption. Prototype First Flight Anticipated in 2021-2022.

SM-150 Turbo-Piston 2 Seat Sportplane



135 KTAS 575 lb Useful Load 850 nm Range

\$85,000 Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$46.50

## SM-150 SPORTPLANE



#### SM-150 SPECIFICATIONS

Aircraft: SM-150 Sportplane Unit Flyaway Cost: \$85,000 Manufacturer: Stavatti Aerospace Ltd

First Flight: 2021-2022

#### Accommodation

Crew Two Seat Side-By-Side Seating Crashworthy Sport Seats

## Internal Dimensions

Cabin Length 67.0 in Cabin Width-Max 60.0 in Cabin Height-Max 41.7 in

#### **Powerplant**

Number Turbo Axial Piston Engine Type Model Sutec 100 Manufacturer Sutec/NeoThrust Max HP 100 Prop RPM 2,300 Prop Type FP Scimitar **Prop Diameter** Number of Blades

#### **Avionics & Displays**

HUD Canopy Embedded Display (CED) HDD SD346 LED Primary Display COMM/GPS Dual WASS GPS/COMM/NAV IFF ADS-B Out & In Transponder All-Axis Digital Autopilot Autopilot FCS Digital Power-By-Wire Digital Bluetooth® Audio Panel Audio Panel ELT/ULB 406 MHZ ELT & ULB

#### Dimensions

Max Wingspan 36 ft 0 in Max Length 24 ft 0 in Max Height 8 ft 8 in Wing Area 137 sq ft Wing Aspect Ratio 9.45 Wing LE Sweep 5.00°

#### **Performance**

Landing over 50 ft, TLW

Max Level Speed @ SL 125 Ktas Max Level Speed @ FL50 131 Ktas Max Level Speed @ FL100 138 Ktas Max Level Speed @ FL150 145 Ktas Max Level Speed @ FL200 154 Ktas 116 Ktas 45 KTAS 41 KTAS 1,243 ft/min 20,000 ft 592 nm 616 nm 75% Cruise Range @ FL100 50% Cruise Range @ FL100 671 nm 850 nm Takeoff Ground Roll, TTW 526 ft Takeoff over 50 ft, TTW 605 ft Landing Ground Roll, TLW 232 ft

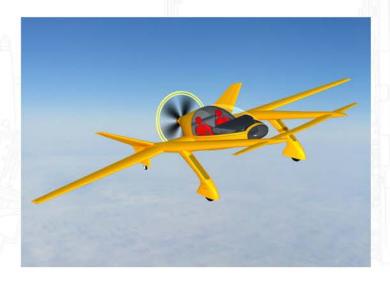
#### Weights

1.000 lbs Empty Max Internal Fuel 156 lbs Max Payload 444 lbs Useful Load 600 lbs Typical Landing (TLW) 1,600 lbs Max Take-Off (MTOW) 1,600 lbs

#### Loadings

Wing Loading (MTOW) 11.7 lbs/sa ft Power Loading (MTOW) 16.0 lbs/hp Design Load Factor (MTOW) +4.4 Ultimate Load Factor (MTOW)

#### Max Cruise Speed @ SL 113 Ktas Max Cruise Speed @ FL100 125 Ktas Max Cruise Speed @ FL200 138 Ktas Typical Cruise Speed @ FL100 106 Ktas Typical Cruise Speed @ FL200 Takeoff Speed; MTOW Stall Speed; MTOW Max Climb Rate @ SL Service Ceiling Max Speed Range @ SL 539 nm Max Speed Range @ FL100 75% Cruise Range @ SL





## STAVATTI AEROSPACE

267 ft

## SM-26 SLEEK



The SM-26 is a High Performance Sportpane that delivers fighter handling, agility and style to general aviation. Produced in both turbocharged as well as turboprop variants, the SM-26 will be the world's fastest FAR 23 certified piston powered aircraft. Available as a civil sportplane as well as a military trainer and light attack aircraft, the SM-26 is a 66% scale replica of its CAS cousin, the SM-27 Machete.

SM-26 Sleek
Turbo Piston/Turboprop
High Performance Sportplane



330 KTAS 1,150 lb Useful Load 1,100 nm Range

\$850,000 Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$331

## SM-26 SLEEK



### **SM-26 SLEEK SPECIFICATIONS**

Aircraft: SM-26 Sleek Sportplane Unit Flyaway Cost: \$850,000

Manufacturer: Stavatti Aerospace Ltd

First Flight: 2022-2023

#### Accommodation

Crew Two Seat Tandem Seating Crashworthy Sport Seats

### **Internal Dimensions**

Cabin Length 114.0 in Cabin Width-Max 27.0 in Cabin Height-Max 44.0 in

#### **Powerplant**

Number Type 495 cu in Turbocharged V8 Model OE750 Manufacturer NeoThrust Max HP 750 Prop RPM 2,057 Prop Type CS Scimitar **Prop Diameter** Number of Blades

#### **Avionics & Displays**

HUD Canopy Embedded Display (CED) SD224 LED Primary Display HDD Dual WASS GPS/COMM/NAV COMM/GPS IFF ADS-B Out & In Transponder Autopilot All-Axis Digital Autopilot Digital Power-By-Wire FCS Digital Bluetooth® Audio Panel Audio Panel 406 MHZ ELT & ULB ELT/ULB

#### **Dimensions**

Max Wingspan 36 ft 0 in May Lovel Speed @ SL Max Length 25 ft 8 in Max Height 8 ft 6 in Wing Area 156.6 sq ft Wing Aspect Ratio 8.4 Wing LE Sweep 4.25°

J IL O III	Max Level Speed (a) SL	268 Ktas	
5 ft 8 in	Max Level Speed @ FL50	282 Ktas	
3 ft 6 in	Max Level Speed @ FL100	296 Ktas	
.6 sq ft	Max Level Speed @ FL200	330 Ktas	
8.4	Max Level Speed @ FL300	311 Ktas	
4.25°	Max Cruise Speed @ SL	233 Ktas	
	Max Cruise Speed @ FL100	257 Ktas	
	Max Cruise Speed @ FL200	285 Ktas	
	Typical Cruise Speed @ FL100	219 Ktas	
550 lbs	Typical Cruise Speed @ FL200	242 Ktas	
660 lbs	Takeoff Speed; MTOW	65 KTAS	
130 lbs	Stall Speed; MTOW	52 KTAS	
150 lbs	Max Climb Rate @ SL	5,081 ft/min	
140 lbs	Service Ceiling	40,000 ft	
	Max Speed Range @ SL	440 nm	
700 lbs	Max Speed Range @ FL300	887 nm	
	Eco Cruise Range @ SL	575 nm	
	Eco Cruise Range @ FL100	681 nm	
	Eco Cruise Range @ FL300	1,019 nm	
bs/sq ft	Takeoff Ground Roll, TTW	226 ft	
lbs/hp	Takeoff over 50 ft, TTW	659 ft	
+6.50	Landing Ground Roll, TLW	597 ft	
+9.75	Landing over 50 ft, TLW	1,023 ft	

#### **Performance**



### Weights

2.550 lbs **Empty** 660 lbs Max Internal Fuel Max Baggage 130 lbs Useful Load 1.150 lbs Typical Landing (TLW) 3,140 lbs Max Take-Off (MTOW) 3,700 lbs

#### Loadings

Wing Loading (MTOW) Power Loading (MTOW) Design Load Factor (MTOW) Ultimate Load Factor (MTOW)

23.6 lbs/sa ft 4.9 lbs/hp +6.50

STAVATTI AEROSPACE

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## SM-31 STILETTO



The SM-31 Stiletto is an Advanced, 5th Generation Supersonic Trainer and Light Fighter. Produced in Single Seat (SM-31S) and Two Seat (SM-31T) configurations, the SM-31 is a stealthy, single engine aircraft with an internal weapons bay. The SM-31 will replace F-5, T-38, T-50, T-7A, M-346 and MiG-21 Aircraft worldwide.

SM-31 Stiletto
Afterburning Turbofan
Trainer and Light Fighter



1.5+ Mach 7,000 lb Warload 2,000+ nm Range

\$17 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$3,204

## SM-31 STILETTO



#### **SM-31 STILETTO SPECIFICATIONS**

Aircraft: SM-31 Stiletto

Unit Flyaway Cost: \$17,000,000

Manufacturer: Stavatti Aerospace Ltd

First Flight: 2021-2022

#### Accommodation

Single (S) or Two Seat (T) MK16 or MK18 Ejection Seats Crew Seating

#### **Powerplant**

Number	1
Туре	Afterburning Turbofan
Model	F125X
Manufacturer	Honeywell
Afterburning Thrust (lbs)	12,250
Military Thrust (lbs)	8,120
Air Inlets	Bifurcated Pitot Shock
Nozzle	VG Thrust Vectoring

#### Dimensions

Max Wingspan	24 ft 0 in
Max Length	41 ft 8 in
Max Height	9 ft 0 in
Wing Area	176 sq ft
Wing Aspect Ratio	3.27
Wing LE Sweep	30°

#### Weights

8,700 lbs
3,800 lbs
13,400 lbs
11,500 lbs
20,500 lbs

#### Loadings

Wing Loading-MMW	65.3 lbs/sq ft
Wing Loading-MTOW	116.5 lbs/sq ft
Thrust-to-Weight-MMW	1.07 to 1
Thrust-to-Weight-MTOW	0.60 to 1
Design Load Factor-MTOW	+9.0
Ultimate Load Factor-MTOW	+13.5

#### Armament

Fixed Internal	1 x 20mm M61A2
Ammunition	500 rds
Stores Stations (Internal	& External) 8
Max Warload	7,100 lbs

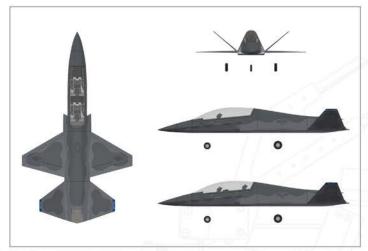
#### **Avionics & Electronic Warfare**

Radar (opt)	RACR
IRST	IRST 21
HUD	CED, HMD or LiteHUD
Comm	AN/ARC-210 Gen V
IFF	AN/APX-125
Data Link	TACR-16DL
GPS/INS	FALCN
TACAN	AN/ARN-153(V)
RF ECM (opt)	AN/ALQ-211A(V)4
MAWS (opt)	AN/AAR-58
SPJ (opt)	AN/ALQ-214(V)4/5
Chaff/Flare	AN/ALE-47

#### Performance

Max Level Speed @ SL	1.22 Mach
Max Level Speed @ FL350	1.72 Mach
Max Cruise Speed @ SL	0.90 Mach
Max Cruise Speed @ FL350	0.90 Mach
Typical Cruise Speed @ FL350	0.80 Mach
Takeoff Speed; MTOW	177 Ktas
Stall Speed; MTOW	150 Ktas
Approach Speed; TLW	127 Ktas
Stall Speed; TLW	106 Ktas
Max Climb Rate @ SL	39,554 ft/min
Service Ceiling Exceeds	50,000 ft
1.72 Mach Range, IF	220 nm
1.72 Mach Radius, IF	103 nm
0.90 Mach Range, IF	1,327 nm
0.90 Mach Radius, IF	452 nm
Ferry Range	1,982 nm
Takeoff Ground Roll, TTW	1,370 ft
Landing Ground Roll, TLW	1,490 ft





## SM-47 SUPER MACHETE



The SM-47 is a single engine afterburning turbofan powered Air Defense Fighter, Strike Fighter and Trainer. A super-maneuverable aircraft with Forward Swept Wings, the SM-47 has a Mach 2.2 maximum level speed and a tactical radius on internal fuel of 800 nm. Armed with a 20mm cannon and 9 external hardpoints to carry 12,000 lbs, the SM-47 replaces F-16 ADFs, F/A-18A/Bs, Mirage 2000s and JAS 39 Gripens.

SM-47 Super Machete Afterburning Turbofan Air Defense Fighter



2.0+ Mach 12,000 lb Warload 625 nm Radius

\$25 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$3,858

## SM-47 SUPER MACHETE



#### **SM-47 SUPER MACHETE SPECIFICATIONS**

Aircraft: SM-47 Super Machete Unit Flyaway Cost: \$25,000,000

Manufacturer: Stavatti Aerospace Ltd First Flight: 2022-2024

#### Accommodation

Crew Single (S) or Two Seat (T) Seating MK18 or ACES 5 Ejection Seats

#### Powerplant

Number	1
Туре	Afterburning Turbofan
Model	F414-EPE
Manufacturer	GEAE
Afterburning Thrust (lbs)	26,600
Military Thrust (lbs)	16,232
Air Inlets	Bifurcated Pitot Shock
Nozzle	VG Thrust Vectoring

#### Dimensions

Max Wingspan	33 ft 4 in
Max Length	42 ft 0 in
Max Height	12 ft 4 in
Wing Area	308 sq ft
Wing Aspect Ratio	3.74
Wing LE Sweep	-35°

#### Weights

Empty	16,000 lbs
Max Internal Fuel (IF)	7,000 lbs
Max External Warload	12,000 lbs
Typical Combat (TCW)	23,700 lbs
Max Take-Off (MTOW)	36,000 lbs

### Loadings

Wing Loading-TCW	76.9 lbs/sq ft
Wing Loading-MTOW	116.9 lbs/sq ft
Thrust-to-Weight-TCW	1.12 to 1
Thrust-to-Weight-MTOW	0.74 to 1
Design Load Factor-TCW	13.7
Design Load Factor-MTOW	9.0

#### Armament

Fixed Internal	1 x 20mm M61A2
Ammunition	1,000 rds
External Hardpoints	8
Max Warload	12,000 lbs
External Hardpoints	M-1-1-10

#### **Avionics & Electronic Warfare**

Radar (opt)	RACR
IRST	IRST 21
HUD	CED, HMD or LiteHUD
Comm	AN/ARC-210 Gen V
IFF	AN/APX-125
Data Link	TACR-16DL
GPS/INS	FALCN
TACAN	AN/ARN-153(V)
RF ECM (opt)	AN/ALQ-211A(V)4
MAWS (opt)	AN/AAR-58
SPJ (opt)	AN/ALQ-214(V)4/5
Chaff/Flare	AN/ALÉ-47

#### Performance

Max Level Speed @ SL	1.23 Mach
Max Level Speed @ FL350	2.27 Mach
Max Cruise Speed @ SL	1.00 Mach
Max Cruise Speed @ FL350	1.10 Mach
Typical Cruise Speed @ FL350	0.85 Mach
Takeoff Speed; MTOW	172 Ktas
Stall Speed; MTOW	156 Ktas
Approach Speed; TLW	133 Ktas
Stall Speed; TLW	111 Ktas
Max Climb Rate @ SL	47,700 ft/min
Service Ceiling Exceeds	55,000 ft
Max Speed Range, IF	230 nm
Max Speed Radius, IF	105 nm
0.85 Mach Range, IF	1,420 nm
0.85 Mach Radius, IF	694 nm
Ferry Range	2,051 nm
Takeoff Ground Roll, TTW	1,543 ft
Landing Ground Roll, TLW	2,073 ft



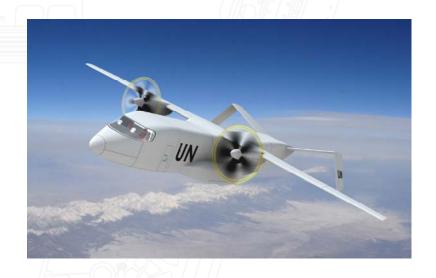


## SM-100 TRANSPORT



The SM-100 is a twin engine transport designed to carry 25,000 lbs to 35,000 lbs of cargo in a 35 ft long cargo bay that is 10 ft high and 11.82 ft wide. With a 310 knot cruise speed and a range of nearly 3,000 nm while transporting a 12.5 ton load, the SM-100 can operate from short unprepared runways. A rugged airlifter, the SM-100 will be suitable for all transport missions. The SM-100 will be produced in turboprop, hybrid electric, electric and hydrogen powered variants.

SM-100 Twin Turboprop Transport



390 KTAS 25,000 lb Payload 3,000 nm Range

\$36 Million Flyaway Cost Cost Per Flight Hour (CPFH): \$2,902

## SM-100 TRANSPORT



### **SM-100 SPECIFICATIONS**

Aircraft: SM-100 Transport Unit Flyaway Cost: \$32,000,000 Manufacturer: Stavatti Aerospace Ltd

First Flight: 2022-2024

#### Accommodation

Crew Seating 72

#### **Powerplant**

Number	2
Type	Turboprop
Model	PW150 Derivative
Manufacturer	P&W Canada
Max SHP	6,000
Prop Type	Scimitar Prop Fan
Prop Diameter	162 in
Number of Blades	8

#### **Dimensions**

Max Wingspan	100 ft 0 in
Max Length	86 ft 0 in
Max Height	21 ft 4 in
Wing Area	900 sq ft
Wing Aspect Ratio	11.1
Wing LE Sweep	0.0°

#### Weights

Empty	42,000 lbs
Max Internal Fuel (JP-8)	22,000 lbs
Max Fuel Payload	26,000 lbs
Max Payload	35,000 lbs
Useful Load	48,000 lbs
Typical Landing (TLW)	70,200 lbs
Max Take-Off (MTOW)	90,000 lbs

#### Loadings

Wing Loading (TLW)	78.0 lbs/sq ft
Wing Loading (MTOW)	100.0 lbs/sq ft
Power Loading (TLW)	5.6 lbs/shp
Power Loading (MTOW)	7.5 lbs/shp
Design Load Factor (MTOW)	2.5 g

#### **Payload Configurations**

20 ft Sea-Land Containers	1
LD-3 Containers	6
88" x 108" 463L Pallets	4
HMMWVs (Humvees)	2
Economy Seats @ 31 in Pitch	72
Business Seats @ 31 in Pitch	50
Max Combat Troops	84
Max Para Troops	60
Max Liter Patients	63

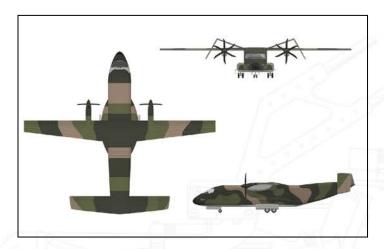
#### **Internal Dimensions**

Cargo Hold Length	35 ft 0 in
Cargo Hold Max Width	11 ft 10 in
Cargo Hold Max Height	10 ft 0 in
Cargo Hold Floor Area	395 sq ft

#### **Performance**

Max Level Speed @ SL	342 Ktas
Max Level Speed @ FL150	390 Ktas
Max Level Speed @ FL300	328 Ktas
Continuous Speed @ FL150	374 Ktas
Continuous Speed @ FL250	343 Ktas
Typical Cruise Speed @ FL150	350 Ktas
Typical Cruise Speed @ FL250	310 Ktas
Takeoff Speed @ MTOW, SL	116 Ktas
Approach Speed @ TLW, SL	118 Ktas
Stall Speed @ TLW, SL	91 Ktas
Max Climb Rate @ SL	2,664 ft/min
Service Ceiling	>35,000 ft
Max Range @ FL150	2,703 nm
Max Range @ FL200	2,949 nm
Max Range @ FL250	2,986 nm
Max Payload Range @ FL150	1,243 nm
Max Payload Range @ FL250	1,355 nm
Ferry Range with Roll-On Tank	5,300 nm
Takeoff Ground Roll, TTW	1,787 ft
Takeoff Over 50 ft, TTW	2,595 ft
Landing Ground Roll, TLW	1,190 ft
Landing Over 50 ft, TLW	2,316 ft





## SM-100AT AIRTANKER



#### **SM-100AT SPECIFICATIONS**

Aircraft: SM-100AT Airtanker & Water Bomber Unit Flyaway Cost: \$36,000,000

Manufacturer: Stavatti Aerospace Ltd

First Flight: 2022-2024

#### Accommodation

Crew Seating 72

#### **Powerplant**

Number	2
Type	Turboprop
Model	PW150 Derivative
Manufacturer	P&W Canada
Max SHP	6,000
Prop Type	Scimitar Prop Fan
Prop Diameter	162 in
Number of Blades	Q

#### **Dimensions**

Max Wingspan	100 ft 0 in
Max Length	86 ft 0 in
Max Height	21 ft 4 in
Wing Area	900 sq ft
Wing Aspect Ratio	11.1
Wing LE Sweep	0.0°

#### Weights

Empty	43,550 lbs
Max Internal Fuel (JP-8)	22,000 lbs
Max Retardant Payload	35,000 lbs
Max Fuel with Retardant	10,500 lbs
Useful Load	46,450 lbs
Typical Landing (TLW)	46,075 lbs
Max Take-Off (MTOW)	90,000 lbs

#### Loadings

Wing Loading (TLW)	51.2 lbs/sq ft
Wing Loading (MTOW)	100.0 lbs/sq ft
Power Loading (TLW)	3.8 lbs/shp
Power Loading (MTOW)	7.5 lbs/shp
Design Load Factor (MTOW)	2.5 g

#### **Retardant Delivery (RADS)**

RADS Manufacturer	Coulson
RADS Model	RADS-XXL
RADS Capacity (USG)	4,200
RADS Capacity (lbs)	35,000
RADS Flow Rate (gpm)	1,600
RADS Net Weight (lbs)	2,760
RADS & Retardant (lbs)	37,760
Max Fuel with Retardant (lbs)	10,500

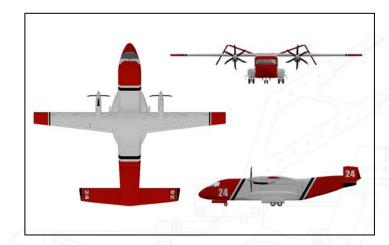
#### **Internal Dimensions**

Cargo Hold Length	35 ft 0 in
Cargo Hold Max Width	11 ft 10 in
Cargo Hold Max Height	10 ft 0 in
Cargo Hold Floor Area	395 sq ft

#### **Performance**

Max Level Speed @ SL	342 Ktas
Max Level Speed @ FL150	0 390 Ktas
Max Level Speed @ FL300	328 Ktas
Continuous Speed @ FL15	50 374 Ktas
Continuous Speed @ FL25	50 343 Ktas
Typical Cruise Speed @ Fl	L150 350 Ktas
Typical Cruise Speed @ Fl	
Takeoff Speed @ MTOW,	
Approach Speed @ TLW,	
Stall Speed @ TLW, SL	91 Ktas
Max Climb Rate @ SL	2,664 ft/min
Service Ceiling	>35,000 ft
Max Range @ FL150	2,703 nm
Max Range @ FL200	2,949 nm
Max Range @ FL250	2,986 nm
Max Payload Range @ FL	
Max Payload Range @ FL	250 1,355 nm
Ferry Range with Roll-On	Tank 5,300 nm
Takeoff Ground Roll, TTW	1,787 ft
Takeoff Over 50 ft, TTW	2,595 ft
Landing Ground Roll, TLW	
Landing Over 50 ft TLW	2 316 ft





## SM-36 STALMA



The SM-36 Stalma is a single engine, afterburning turbofan powered, Lo-Observable Air Superiority and Multi-Role Fighter. Equipped with variable geometry swing wings, canard foreplanes, internal weapons carriage and thrust vectoring exhaust nozzles, the SM-36 is a Mach 2.6, supermaneuverable, 6th generation, STOL supercruise fighter intended to replace F/A-18E/F Super Hornets and F/A-35s.

SM-36 Stalma
Afterburning Turbofan
Multi-Role Fighter



Mach 2.6+ 20,000 lb Warload 900 nm Radius

\$50 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$5,682

## SM-36 STALMA



#### **SM-36 STALMA SPECIFICATIONS**

Aircraft: SM-36 Stalma Unit Flyaway Cost: \$50,000,000

Manufacturer: Stavatti Aerospace Ltd First Flight: 2023-2024

#### Accommodation

Crew Single (S) or Two Seat (T) Seating MK18 or ACES 5 Ejection Seats

#### Powerplant

Number
Type
Model
Model
Manufacturer
Afterburning Thrust (Ibs)
Military Thrust (Ibs)
Air Inlets
Nozzle
Afterburning Thrust (Ibs)
ACE/E1400 VCE
GEAE/Stavatti
50,000
Internal Compression
LO VG Thrust Vectoring
LO VG Thrust Vectoring

#### Dimensions

 Max Wingspan
 64 ft 0 in/34 ft 9 in

 Max Length
 58 ft 0 in

 Max Height
 13 ft 6 in

 Wing Area
 580 sq ft

 Wing Aspect Ratio
 7.4/2.2

 Wing LE Sweep
 5°/70°

#### Weights

 Empty
 24,000 lbs

 Max Internal Fuel (IF)
 20,000 lbs

 Max External Warload
 21,000 lbs

 Typical Combat (TCW)
 37,000 lbs

 Max Take-Off (MTOW)
 65,000 lbs

#### Loadings

 Wing Loading-TCW
 63.8 lbs/sq ft

 Wing Loading-MTOW
 112.1 lbs/sq ft

 Thrust-to-Weight-TCW
 1.41 to 1

 Thrust-to-Weight-MTOW
 0.80 to 1

 Design Load Factor-TCW
 12.5

 Design Load Factor-MTOW
 7.5

#### **Armament**

Fixed Internal 1 x 20mm M61A2 or DEW Ammunition 1,000 rds Stores Stations (Internal & External) 8 Max Warload 21,000 lbs

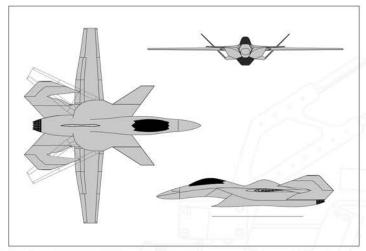
#### **Avionics & Electronic Warfare**

Radar	APG-81 or ARACR
IRST	EOTS or AEOTS
HUD	CED or HMD
Comm	AN/ASQ-242 or ACNI
IFF	AN/ASQ-242 or ACNI
Data Link	AN/ASQ-242 or ACNI
GPS/INS	FALCN
RF ECM	AN/ASQ-239 or AFIDEWS
MAWS	AN/ASQ-239 or AFIDEWS
DAS	AN/AAQ-37 or AFIDEWS
SPJ	AN/ASQ-239 or AFIDEWS
Chaff/Flare	AN/ALE-52

#### Performance

100000000000000000000000000000000000000		
	Max Level Speed @ SL	1.25 Mach
	Max Level Speed @ FL350	2.60 Mach
	Supercruise Speed @ SL	1.20 Mach
0 lbs	Supercruise Speed @ FL350	1.80 Mach
0 lbs	Typical Cruise Speed @ FL350	0.85 Mach
0 lbs	Approach Speed; TLW	118 Ktas
0 lbs	Stall Speed; TLW	97 Ktas
0 lbs	Max Climb Rate @ SL	75,000 ft/min
O IDS	Service Ceiling	75,000 ft
	Max Speed Range, IF	422 nm
	Max Speed Radius, IF	201 nm
77	Supercruise Range, IF	1,577 nm
/sq ft	Supercruise Radius, IF	775 nm
/sq ft	0.85 Mach Range, IF	2,324 nm
to 1	0.85 Mach Radius, IF	1,142 nm
to 1	0.85 Mach Ferry Range	3,400 nm
12.5	Takeoff Ground Roll, TTW	1,543 ft
7.5	Landing Ground Roll, TLW	1,312 ft





## SM-39 RAZOR



The SM-39 Razor is a 6th generation twin engine Air Superiority and Air Dominance Fighter designed for both land and carrier based operations. Powered by two next generation variable cycle afterburning turbofans, the SM-39 will have a maximum level speed in excess of Mach 4.0, a tactical radius greater than 1,300 nm, internal weapons carriage and super-maneuverability. The SM-39 will replace F/A-22, F-15, F-14, Su-27 and Su-57 aircraft.

SM-39 Razor Afterburning Turbofans Air Dominance Fighter



Mach 4+ 25,000 lb Warload 1,300 nm Radius

\$85 Million Unit Flyaway Cost Cost Per Flight Hour (CPFH): \$10,117

## SM-39 RAZOR



#### **SM-39 RAZOR SPECIFICATIONS**

Aircraft: SM-39 Razor

Unit Flyaway Cost: \$85,000,000

Manufacturer: Stavatti Aerospace Ltd First Flight: 2023-2026

#### Accommodation

Crew Single (S) or Two Seat (T) Seating MK18 or ACES 5 Ejection Seats

#### Powerplant

#### Dimensions

 Max Wingspan
 54 ft 6 in

 Max Length
 78 ft 6 in

 Max Height
 13 ft 8 in

 Wing Area
 1,132 sq ft

 Wing Aspect Ratio
 2.62

 Wing LE Sweep
 50.0°

#### Weights

 Empty
 46,000 lbs

 Max Internal Fuel (IF)
 30,000 lbs

 Max External Warload
 25,000 lbs

 Typical Combat (TCW)
 65,000 lbs

 Max Take-Off (MTOW)
 100,000 lbs

#### Loadings

 Wing Loading-TCW
 57.4 lbs/sq ft

 Wing Loading-MTOW
 88.3 lbs/sq ft

 Thrust-to-Weight-TCW
 1.60 to

 Thrust-to-Weight-MTOW
 1.04 to

 Design Load Factor-TCW
 11.2 g

 Design Load Factor-MTOW
 7.5 g

#### Armament

Fixed Internal 1 x 20mm M61A2 or DEW
Ammunition 1,000 rds
Stores Stations (Internal & External) 6
Max Warload 25,000 lbs

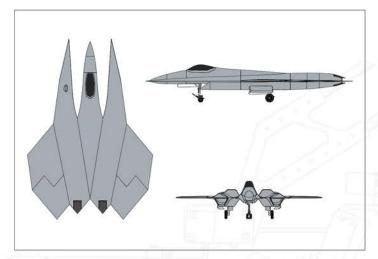
#### **Avionics & Electronic Warfare**

ARACR AESA
EOTS or AEOTS
CED or HMD
AN/ASQ-242 or ACNI
AN/ASQ-242 or ACN
AN/ASQ-242 or ACN
FALCN
AN/ASQ-239 or AFIDEWS
AN/ASQ-239 or AFIDEWS
AN/ASQ-239 or ADAS
AN/ASQ-239 or AFIDEWS
AN/ALE-52

#### Performance

Max Level Speed @ SL	1.30 Mach
Max Level Speed @ FL650	4.00 Mach
Supercruise Speed @ FL350	2.50 Mach
Takeoff Speed: MTOW	136 Ktas
Stall Speed: MTOW	123 Ktas
Approach Speed: TLW	115 Ktas
Stall Speed; TLW	96 Ktas
Max Climb Rate @ SL	>75,000 ft/min
Service Ceiling	>100,000 ft
Max Speed Range, IF	950 nm
Max Speed Radius, IF	463 nm
Supercruise Range, IF	1,200 nm
Supercruise Radius, IF	585 nm
0.85 Mach Range, IF	2,800 nm
0.85 Mach Radius, IF	1,300 nm
0.85 Mach Ferry Range	5,000 nm
Takeoff Ground Roll, TTW	752 ft
Landing Ground Roll, TLW	1,460 ft





## 1M PLANT



- Stavatti's Proposed 1M Plant will have a footprint of 1 Million sq ft and provide over 2 Million sq ft of combined office and aircraft manufacturing and assembly space.
- The 1M Plant is designed to manufacture 3 or more Stavatti aircraft models simultaneously under one roof and could serve as Headquarters to Stavatti Aerospace.
- The 1M Plant will employ 10,000 or more workers for a minimum of 20 years.







- Stavatti's has begun the site selection process for the 1M Plant and is evaluating more than 20 potential candidate sites at which to establish this facility.
- Ground-Breaking on the iconic 1M Plant is planned for 2023-2028.

## **ENABLING TECH**



## Key Enabling Breakthrough and Disruptive Technologies that Stavatti is Developing or Has Licensed For Direct Applications Include:

#### **AIRCRAFT**

Patented & Novel Vehicle Configurations Internal Compression Air Intakes Wave Drag Reducing Configurations Channel Wing STOL Configurations Circulation & Boundary Layer Control Non-Conventional Lift/Inertial Propulsion

#### **AIRCRAFT SYSTEMS**

Forth Power-By-Wire Flight Controls Compact Electromechanical Actuators Piezo-Electric Deicing

#### AIRFRAME

Novel Structural Configurations Foam Metal Sandwich Structures Nano-Corrosion Control

#### **ARMOR**

Foam Metal Sandwich Armor Beskar™ Alloy Armor HMWPIB Reactive Armor Molecular Chromium Plate

#### **AUTONOMY**

Synthetic Intelligence (SI)

#### **BATTERIES & CAPACITANCE**

Lithium-Graphene-Silicon Anode Battery

#### **CREW PROTECTION**

Standard Armor G-Suite (STAGS) Modular Armored Cockpit (MAC) Proprietary Zero-Zero Ejection Seats

#### **COCKPIT & HUMAN FACTORS**

Proprietary Crewstation Climate Systems Proprietary Flight and Throttle Grips

#### COMPUTING

HyperKnowledge™ Photonic Processors EtherForth and GreenArrays

#### **DISPLAYS**

Canopy Embedded Display (CED) Holographic Multi-Functional Display (HMFD) Full Panel Active Displays

#### **ENERGY & POWER**

K-Capture Electron Reactor Compact Fusion Reactor (CFR) Modulated Interference Fusion (MIF) Thermo-Alpha Radio-Isotope Fuel Cell Economical Synthesis of Radioisotope Fuels

#### **MANUFACTURING TECHNOLOGIES**

Directed Light Fabrication
Explosive Forming and Joining
Laserwelding and Friction Stir Welding
Laserforming of Titanium
Femtosecond Laser Machining

#### **MATERIALS**

Non-Carbothermic Titanium Diboride Scandium Aluminum & Titanium Boron & Graphene Nano-Fiber Composites US5670574 High Temperature Resin Beskar™ Alloy & Beskar Steel™

#### **POWERPLANTS & PROPULSION**

Liquid Hydrogen & Hydrogen Fuel Cell Power Electric and Hybrid Diesel Electric Power Variable Cycle Turbojet Powerplants MagnetoHydrodynamic Energy Bypass (MHEB) Bladeless Boundary Layer Turbines Radioisotope Gas Turbines Hi ISP Plasma Rockets and Ion Engines Integrated MicroGrid Solutions (IMGS) Inertial Propulsion System (IPS) Compact Fusion Reactor (CFR)

#### **ROBOTICS**

Autonomous Flight Droid (Aeromech Droid™)

#### **SENSOR & AVIONICS**

Micro AESA Sensor Technology Charge Telescope Stavatti Avionics System Architecture (SASA)

#### **SOFTWARE**

Stavatti Proprietary CAD/CAM/PLM Solution

#### **STEALTH & LOW OBSERVABILITY**

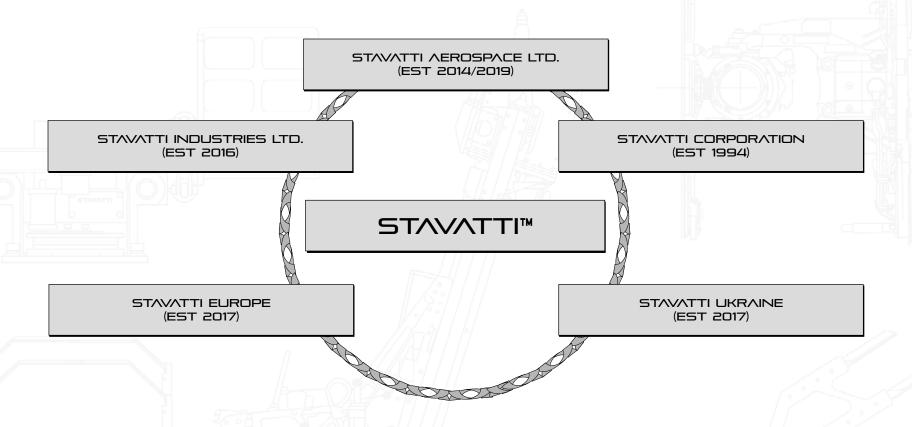
Active Wave Attenuation (AWA) Active Plasma Cavity Stealth (APCS) Ceramic-Metal Radar Absorbent Material Nano-Stealth

#### **WEAPON SYSTEMS**

Gas Dynamic Directed Energy Weapons
Positron Warhead
Compact Air-To-Air Missile (CAAM)
Next Generation 20mm and 30mm Cannon Systems

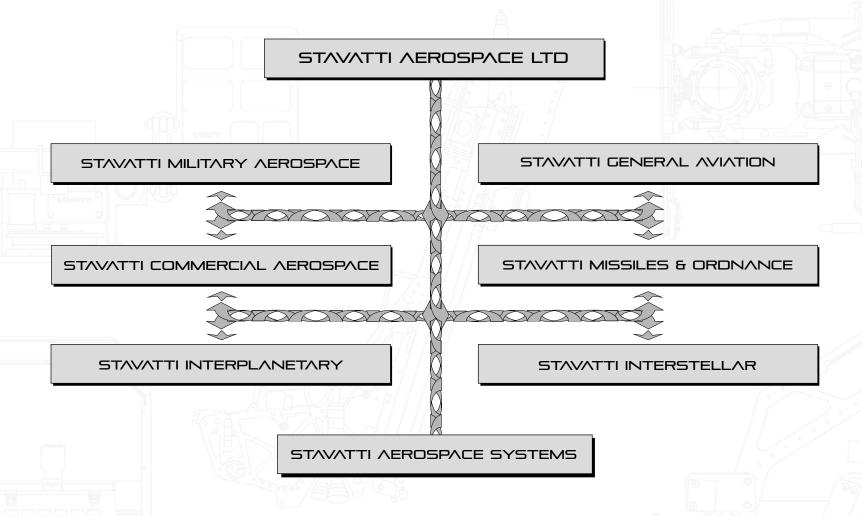
## STAVATTI COMPANIES





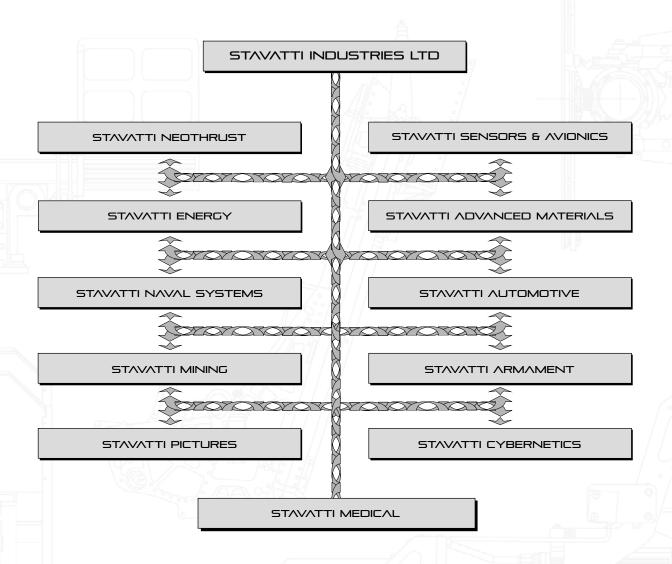
## *AEROSPACE ORG*





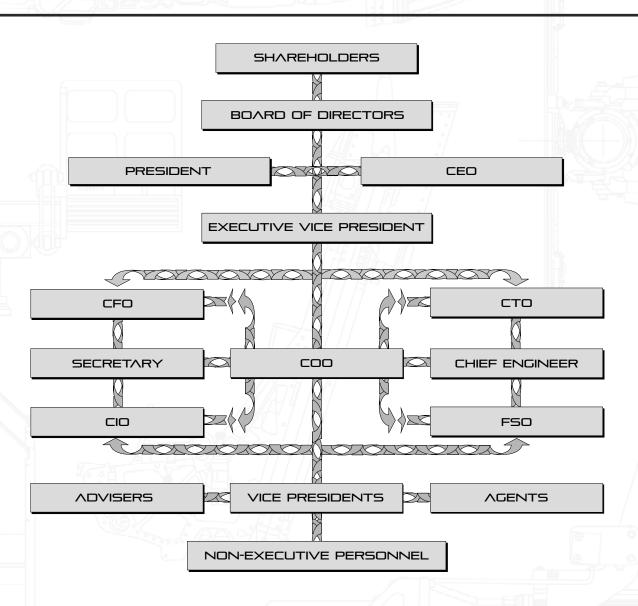
## INDUSTRIES ORG











## CORE VALUES



# Stavatti business practices adhere to distinct Core Values including...

- Best-in-Class Products
- Customer Success
- Mission Focus
- Responsibility and Patriotism
- Commercial Best Practices
- Employee Achievement and Success
- Revenue Creation
- Absolute Quality
- Leadership with Strategic Vision
- Individual Ability
- Continuous Learning, Improvement and Innovation

## RDT&E FUNDING

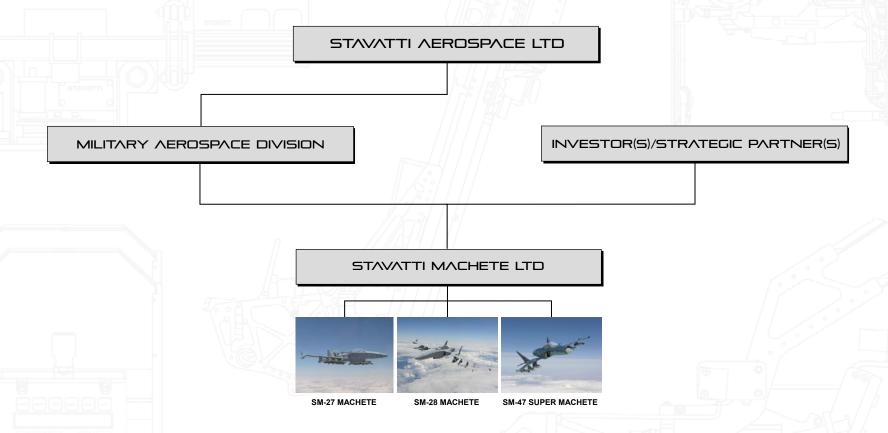


- New Aircraft Development Programs are funded by the internal resources of Stavatti Aerospace and strategic investment partners through equity and debt financing as well as a combination of sources.
- Investors include accredited investors, institutional investors, corporations, industry team members or government entities.
- Investors fund a portion or all of the development costs of a program in exchange for an equity or royalty position in the joint venture company, a direct royalty from the revenues of a specific aircraft product line or a value added interest payment.
- All funding is provided in phases including a risk reducing Demonstration and Validation (Dem/Val) phase, followed by Full Scale Development (FSD) and finally Low Rate Initial Production (LRIP).
- Alternatively, certain programs, in particular special access development programs, are funded entirely by end-user customers under contract, such as the SM-39 Razor which may be funded under a USAF/DoD contract.

## PROGRAM STRUCTURE



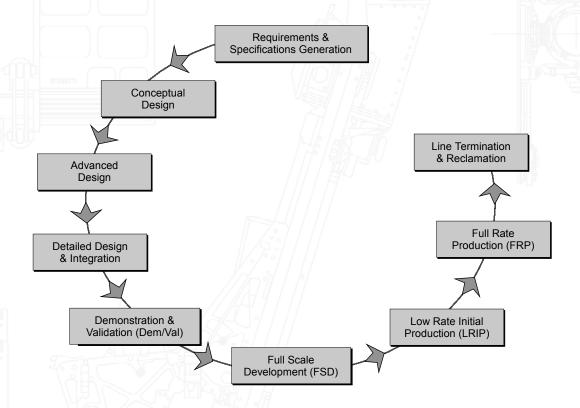
Each Aircraft Program is typically structured as a stand-alone joint venture company owned by Stavatti Aerospace Ltd and Investors and/or Strategic Partners. Joint venture companies are named after their associated program. Programs are managed by an appropriate division of Stavatti Aerospace Ltd. Example aircraft program organizational structures include:



## PROGRAM PROCESS



Stavatti aerospace programs follow a streamlined, design, development, production and customer support process unique to the industry...



Implementing this process, Stavatti develops and delivers entirely new, advanced aircraft without sacrificing quality, performance or value.

## **ENGINEERING**



Stavatti conducts all engineering and design in-house using PLM CAD tools including SolidWorks Premium and CATIA





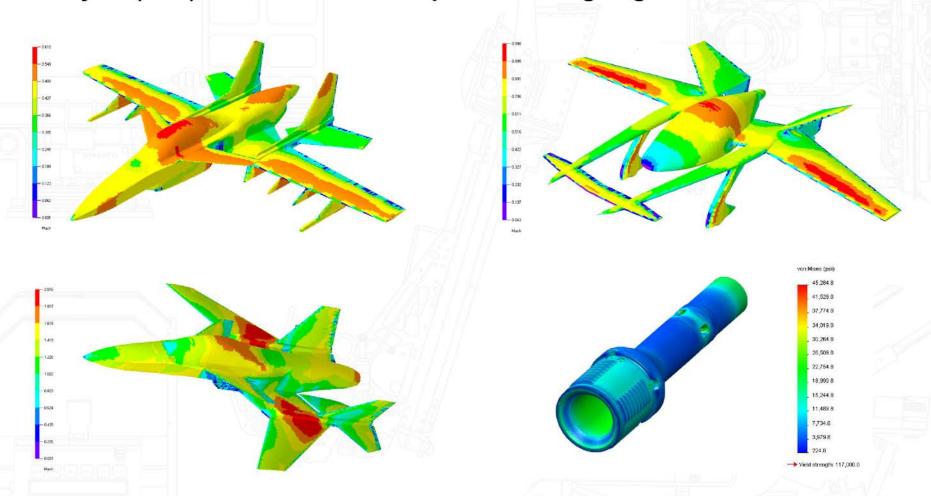




## CFD & FEA



Stavatti performs Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA) of all airframes and parts with ongoing simulation 24/7.



## CERTIFICATION



- Stavatti aircraft will undergo extensive flight and operational testing to achieve Military Qualification and/or FAA Type and Production Certification
- Military aircraft will be flight tested at the Air Force Flight Test Center (AFFTC), Edwards AFB to ensure military qualification.
- Additional US DoD facilities, including China Lake, will be employed throughout the Stavatti weapon system testing effort.



- General Aviation aircraft undergo a complete FAA Type and Production Certification program, such as FAR Part 23, including flight testing at centers in California. Team Members including AESI will provide support.
- Stavatti will utilize Vehicle Systems Simulators (VSS or 'Iron Birds') for lifetime fatigue testing as well as Full Mission Simulators for crew training.

## LOGISTICAL SUPPORT



- Stavatti customers will benefit from full Contractor Logistical Support (CLS) of a comprehensive aerospace defense enterprise.
- Stavatti can provide CLS directly or can work with customers to establish organic logistical support.
- Stavatti will provide total procurement packages, including ground support systems, ordnance, spares and delivery.
- Stavatti will provide complete aircrew flight/combat training services as well as maintenance instruction.
- All aircraft will have a 2,000 Hour Noseto-Nozzle Manufacturers Limited Warranty on all new aircraft and 24/7 worldwide customer assistance.



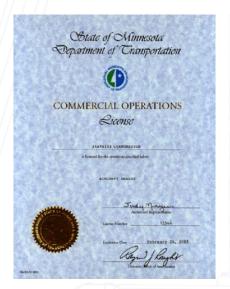
## **CERTIFICATIONS**

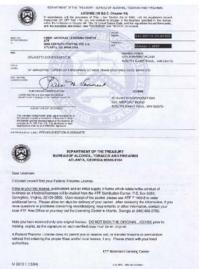


- Stavatti now has the infrastructure to service essential customer aircraft and defense needs now and for decades to come.
- Stavatti has been registered with the State Department-Office of Defense Trade Controls as a manufacturer & exporter of US munitions list items.
- Stavatti sites have been licensed by the ATF and State DOTs. Stavatti is registered with SAM and has CAGE codes 8GT89, 7C5S4, 1DRG1 and 4D9A0.









## NAICS CODES



• North American Industry Classification System Codes (NAICS Codes)
Applicable to Stavatti Aerospace Ltd and Stavatti Industries Ltd Include:

336411	Aircraft Manufacturing
336412	Aircraft Engine and Engine Parts Manufacturing
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
488190	Other Support Activities For Air Transportation
336414	Guided Missile and Space Vehicle Manufacturing
336415	Missile and Space Vehicle Propulsion Unit Manufacturing
336419	Missile and Space Vehicle Auxiliary Equipment Manufacturing
336111	Gas Turbines Except Aircraft Manufacturing
332995	Aircraft Artillery Manufacturing
332993	Ammunition Except Small Arms Manufacturing
332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing
333132	Oil and Gas Field Machinery and Equipment Manufacturing
333131	Mining Machinery and Equipment Manufacturing
332710	Machine Shop
333249	Other Industrial Machinery Manufacturing
332117	Powder Metallurgy Part Manufacturing
541618	Other Management Consulting Services





## **Contact Stavatti today at:**

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STAVATTI BUFFALO 4455 Genesee Street Buffalo, NY 14225 MN Tel: 651-238-5369 NY Tel: 716-205-8396 email: aerospace@stavatti.com http://www.stavatti.com STAVATTI CALIFORNIA 1443 S. Gage Street San Bernardino, CA 92408

