SM-29E SUPER FULCRUM

A Transformational Upgrade For MiG-29, MIG-29S/SE/SM/SMT and MiG-29M Tactical Aircraft Engineered, Installed and Supported by Stavatti Aerospace

AIRCRAFT UPGRADE & IMPROVEMENTS INCLUDING...

- GEAE F414 EPE Afterburning Turbofans
- Raytheon AN/APG-79 AESA Radar
- Stavatti Design Conformal Fuel Tanks (CFTs)
- Gen III Helmet Mounted Display System (HMDS) or JHMCS
- Sparrowhawk HUD or BAE LiteHUD
- L3 580mm x 203mm Large Area Avionics Display (LAAD)
- New Design External Pylons with LAU-129 MRLs
- Increased Internal Fuel Capacity to 12,768 lbs
- Increased External Warload to 14,980 lbs
- Comprehensive Integrated ECM System
- Improved Wheels, Tires, Brakes and Anti-Skid
- Optional Retractable In-Flight Refueling Probe

STAVATT

STAVATTI AEROSPACE LTD • 9400 Porter Road, Niagara Falls, NY 14304 USA • TEL: (651) 238-5369 • email: SM29E@stavatti.com • http://www.stavatti.com

DESCRIPTION

The SM-29E Super Fulcrum is an enhanced performance MiG-29 Fulcrum aircraft that has been transformationally upgraded by Stavatti Aerospace to the "Super Fulcrum" configuration, allowing the aircraft remain a potent and competitive air defense asset through 2040. The proposed upgrades include installation of new GEAE F414 EPE afterburning turbofan engines and re-engineered engine nacelles. The F414 EPE engines will provide greater thrust, lower specific fuel consumption and improve maintainability over the original RD-33 powerplants. The modifications include sensor, avionics and cockpit upgrades including installation of a Raytheon APG-79 AESA radar, Stavatti proprietary Conformal Fuel Tanks (CFTs), a L3Harris Large Area Avionics Display (LAAD), a comprehensive internal ECM/EW suite, an upgraded HUD and advanced Hands on Throttle and Stick (HOTAS). Proposed modifications include NATO standard communications, navigation and electronic warfare systems as well as new wheels, tires, brakes and antiskid. For enhanced mission capability, newly designed pylons and ejectors are proposed to provide for delivery of both current Ukraine Air Force weapons and missiles and NATO ordnance including the AIM-9, AIM-120, JDAM and JSOW weapons. Major airframe components are to be inspected and rebuilt as needed. Structures that can benefit from advanced materials are to be replaced to provide for a new total airframe life of 6,000 flight hours. To increase aircraft range the Conformal Fuel Tanks (CFTs) increase aircraft total internal fuel capacity to 12,768 lbs. A retractable in-flight aerial refueling probe is also available as a cost plus option.

SPECIFICATIONS

Aircraft: SM-29E Super Fulcrum Upgrade Of: MiG-29, MiG-29S/SE/SM/M/SMT/G

Original Manufacturer: MiG Upgrade Provider: Stavatti Aerospace Ltd

Armament

Radar IRST Databus HMDS HUD HDD Comm IFF

Data Link MMDP GPS/INS

RF ECM

RWR

MAWS

SPJ Chaff/Flare

24,960 lbs 12,768 lbs 19,197 lbs 14,980 lbs 39,030 lbs 33,000 lbs 28,470 lbs 52,000 lbs

95.43 lbs/sq ft 1.35 to 1 127.14 lbs/sq ft 1.01 to 1 +10.0 g +7.50 g

Accommodation

Crew SM-29E Single Seat; SM-29F Two Seat Seating K-36DM Ejection Seat Internal Gsh-301 30mm cannon with 150 rds External 7 External Stores Hardpoints

Avionics & Electronic Warfare

Number Type Manufacturer Model Afterburning Thrust (lbs) @ Military Thrust (lbs) @ SL	Afterburning SL	2 Turbofan GEAE F414 EPE 26,300 lbs 16,800 lbs
Military Thrust (lbs) @ SL		16,800 lbs
Total Aircraft Thrust (lbs) @	SL t	52,600 lbs

Dimensions

Powerplant

Max Wingspan	37.27 ft
Max Length	53.42 ft
Max Height	15.52 ft
Wing Area	409 sq ft

Weights

Empty Operating Max Internal Fuel
Max Warload
Typical Takeoff Weight (TTW)
Typical Combat Weight (TCW)
Max Takeoff Weight (TLW)

Loadings

Wing Loading-TCW	
Thrust/Weight-TCW	
Wing Loading-MTOW	
Thrust/Weight-MTOW	
Limit Load Factor-TCW	
Limit Load Factor-MTOW	

AN/APG-79 AESA
IPST21
MIL-STD-1553-B
Gen III HMDS or JHMCS
Sparrowhawk or LiteHUD
508mm x 203mm LAAD
AN/ARC-210(V) Gen V
AN/APX-126,125(V) or 123(V)
TÁCR-16DL
FV-4000
FALCN
AN/ALQ-211A(V)4 (Optional)
AN/ALQ-211A(V)4 (Optional)
AN/AAR-58 (Optional)
AN/ALQ-214 (Optional)
BVP-30-26M & AN/ALE-47

Performance

Stall Speed, TTW-SL	120 KTAS
Stall Speed, TLW-SL	102 KTAS
Stall Speed, MTOW-SL	138 KTAS
Takeoff Speed, TTW-SL	132 KTAS
Takeoff Speed, MTOW-SL	152 KTAS
Approach Speed, TLW-SL	123 KTAS
Approach Speed, MTOW-SL	166 KTAS
Max Level Speed-SL	1.22 Mach
Max Level Speed-FL360	2.55 Mach
Service Ceiling	62,000 ft
Max ROC, TCW-SL	83,400 ft/min
Take-off Run, TTW	749 ft
Landing Run, TLW	1,972 ft
Tactical Radius, Internal Fuel	485 nm
Max Range, Internal Fuel	1,292 nm
Ferry Range (no inflight refueling)	2,096 nm



