Milkor 380: South Africa's Sovereign MALE UAV Enters the Strategic Arena

The Milkor 380 represents a milestone in African aerospace engineering. Developed entirely in South Africa by Milkor, the Medium-Altitude Long-Endurance (MALE) unmanned aerial vehicle is the largest UAV of its kind designed and manufactured on the continent, with all major components built in-house. Its maiden flight on 19 September 2023 marked the culmination of a project aimed at delivering a fully sovereign, ITAR-free unmanned system capable of competing in a global MALE market traditionally dominated by US, Israeli, Turkish, and Chinese platforms.

With an operational range exceeding 2,000 kilometres and a maximum range of up to 4,000 km, the Milkor 380 is optimised for long-duration missions such as border surveillance, maritime patrol, infrastructure protection, and combat support. The aircraft offers an endurance of up to 30 hours, a service ceiling of 30,000 feet, and an operational altitude around 23,000 feet, placing it firmly within the MALE category. Powered by a turbocharged Rotax 915 iS engine, the platform combines efficiency with reliability, achieving cruise speeds between 110 and 150 km/h and a maximum speed of 250 km/h.

The UAV's airframe, measuring 9 metres in length with an 18.6-metre wingspan, has evolved through successive manufacturing refinements. Early prototypes were produced using composite lay-up techniques, while current production benefits from advanced vacuum infusion resin manufacturing, improving structural consistency and weight efficiency. With a maximum take-off weight of 1,500 kg and a payload capacity of 220 kg, the Milkor 380 features five hardpoints to accommodate a wide range of sensors, electronic systems, and effectors.

At the heart of the platform is a fully integrated mission system developed by Milkor. The 380 is designed from the outset to support ISR, COMINT, and SIGINT payloads, mission system and sensor fusion, secure communications and networking, and advanced computing solutions. Operators can conduct missions under manual or fully autonomous flight modes, supported by line-of-sight communications and satellite connectivity for beyond-line-of-sight operations.

The payload suite reflects the platform's multi-domain orientation. The Milkor 380 integrates electro-optical and infrared gimbals, synthetic aperture radar (SAR), and inverse SAR for maritime monitoring, enabling persistent day-and-night surveillance over land and sea. World-class optical systems provide real-time high-definition, infrared, and multispectral video, transmitted to remote ground stations. Architecture also allows for optional integration of customer-specific intelligence payloads, enhancing flexibility for national requirements.

Operationally, the Milkor 380 is conceived as a "guardian in the sky," capable of extended-range patrols, persistent ISR, and opportunistic engagement. Its ITAR-free status is particularly significant for African, Middle Eastern, and Global South users seeking advanced MALE capabilities without political or regulatory constraints tied to Western export regimes.
South Africa has become the launch customer, with the South African Air Force operating five aircraft as of 2024. This adoption underscores both national confidence in the platform and its readiness for operational deployment.

In a global environment where persistent surveillance, maritime domain awareness, and border security are strategic priorities, the Milkor 380 positions Africa as not merely a consumer, but a producer of high-end unmanned systems. It stands as a symbol of industrial sovereignty and a credible alternative in the rapidly expanding MALE UAV market.