



Scan for our social media

Summer Offer*
ABC
CARGO, COURIER, SHIPPING, LOGISTICS

 800 916
 www.abccargo.ae

MBZ-SAT heads to Korea for tests ahead of October launch

36-MEMBER TEAM OF MBRSC ENGINEERS OVERSEEING FINAL PREPARATIONS

DUBAI

 BY SAJILA SASEENDRAN
 Senior Reporter

The Mohammad Bin Rashid Space Centre (MBRSC) yesterday announced the start of environmental testing for MBZ-SAT, the most advanced satellite in the region, after the transportation of the flight model to the Korea Aerospace Research Institute (KARI) testing facility in South Korea.

MBRSC also released a video that showed glimpses of the transportation of the one-tonne satellite named after President His Highness Shaikh Mohammad Bin Zayed Al Nahyan, escorted by Dubai Police.

A 36-member team of engineers from MBRSC, led by Amer Al Sayegh Al Ghaferi, Assistant Director-General of the Aerospace Engineering Sector, MBRSC, is currently in South Korea overseeing the final preparations for MBZ-SAT before its scheduled launch in October.

Environmental testing

The environmental testing phase is expected to span a duration of two months, during which the MBRSC engineers, guided by Tariq Al Nasser, Environmental Test Manager, will conduct four essential tests — Thermal Vacuum (TVAC), Vibration, Acoustic and Mass Properties. These comprehensive tests are vital to verifying the satellite's resilience and functionality under the demanding conditions of space.

Last month, Shaikh Hamdan Bin Mohammad bin Rashid Al Maktoum, Crown Prince of Dubai, Chairman of Dubai Executive Council, and President of MBRSC, approved the MBZ-SAT for launch in October.

The satellite, which is the latest addition to the UAE Satellite Programme, will be launched on a SpaceX Falcon 9 rocket during the Transporter-12 Rideshare mission.

Launch on track

Salem Humaid AlMarri, Director-General, MBRSC, said, "We are making steadfast progress towards the intended launch of MBZ-SAT later this year. Through the exceptional talent and innovative capabilities of our dedicated team of engineers and scientists, we have now entered the critical phase of environmental testing, to ensure the satellite's resilience against the rigours of launch and space operations. "As we advance through



■ For two months, MBRSC engineers will conduct four tests — Thermal Vacuum, Vibration, Acoustic, and Mass Properties — on MBZ-SAT at the Korea Aerospace Research Institute testing facility in South Korea.

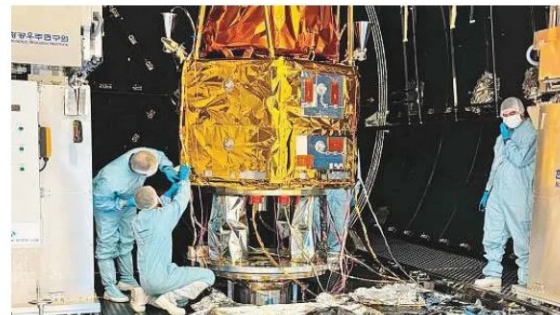
100% DEVELOPED BY EMIRATI ENGINEERS

MBZ-SAT is 100 per cent developed and built by Emirati engineers. The satellite, which has engaged local companies in the manufacturing of nearly 90 per cent of its mechanical structures and most of its electronic modules, has substantially propelled the regional localisation of aerospace industries.

MBZ-SAT, equipped with one of the region's most powerful cameras, can capture high-resolution images of areas smaller than a square metre.

MBRSC will offer rapid turnaround of captured data round-the-clock, sharing it with users globally through an advanced system. This imagery solution can support mapping and analysis, environmental monitoring, navigation, infrastructure management and disaster relief efforts.

— S.S.



this significant milestone, we eagerly anticipate the upcoming phases of preparation. Our focus remains on pushing the boundaries of space science and engineering, furthering our contributions to technological advancements and sustainable development on Earth."

Accuracy and quality

Al Ghaferi said: "The environmental testing phase is a crucial step to ensure MBZ-SAT's readiness to operate in the harsh environment of space.

"Our team of engineers is conducting these tests at the KARI testing facility to ensure the highest levels of accuracy and quality, which aligns with the Centre's vision to develop advanced space technology and enhance the UAE's position in space exploration.

"We look forward to the successful completion of these tests and work towards launching the satellite as scheduled."

Thermal Vacuum testing

The satellite's environmental testing sequence will commence with Thermal Vacuum (TVAC) testing, where it will be subjected to simulated space conditions of extreme tem-

perature and vacuum. Following TVAC, the satellite will undergo Vibration testing, which assesses its structural integrity and ability to withstand the mechanical stresses encountered during launch and operation.

Acoustic testing,

Subsequently, the satellite will undergo Acoustic testing, replicating the intense sound pressure levels experienced during launch, to ensure it can withstand such conditions without damage.

Mass Properties

Finally, Mass Properties testing will be conducted to precisely measure and characterise the satellite's mass distribution, aiding in its accurate deployment and trajectory calculations in space. This sequential testing approach ensures thorough evaluation of the satellite's readiness for safe and reliable operation in space.

Journey to the US

Following the the environmental testing phase, MBZ-SAT will be ready for transport to the US, where following its arrival, it will be prepared for the scheduled launch.



Watch: Dubai flies MBZ-SAT for tests in Korea before October launch