

Skyroot Aerospace Unveils Its First Commercial Rocket | Vikram 1

Why In News

- Indian firm **Skyroot Aerospace** unveiled its first privately designed and developed orbital-class rocket, Named '**Vikram-1**'. This rocket is expected to perform its maiden flight to space in the first quarter of 2024. This is a milestone for the country's fledgling space sector, that has seen significant growth over the last three years, following the roll-out of Space-sector reforms by the Indian Government.
- The reforms enabled private firms to design, develop, build and launch their own rockets, satellites and offer allied services.



About Launch

- Unveiling the **Vikram-1 rocket** at Skyroot's new facility in Hyderabad, Telangana, the firm's Co-Founder Pawan K Chandana said that their firm now employs 300 personnel and has bagged more than Rs. 500crore (\$62.5mn approx) in investment.
- With Skyroot's maiden rocket launch of the vehicle **Vikram-S** in November, 2022, India became the fourth nation where private firms have built and launched rockets. Ours is the largest private rocket development centre in South Asia, he said.



- Space Start-up Skyroot Aerospace Unveiled Its Indigenously Built Vikram-1 Rocket Which Is Expected To Deliver Satellites To Low Earth Orbit Early Next Year. Science And Technology Minister Jitendra Singh Also Inaugurated 'The MAX-Q Campus', The New Headquarters Of The Start-up At GMR Aerospace Hyderabad.
- "We've named our new facility '**MaxQ**', it is a technical term denoting the maximum stress and loads that a rocket experiences during its ascent. A rocket has to undergo and push through all this, before it reaches space.
- Likewise, we would like our team to push ourselves to do extraordinary things in the space sector" he reasoned. Skyroot also showcased an animated preview of their maiden orbital launch, that is expected in the first quarter of 2024.



Vikram - 1

- **Vikram-1 is a multi-stage launch vehicle** with a capacity to place around **300 kg** payloads in Low Earth Orbit.
- It is an all-**carbon-fibre-bodied** rocket that can place multiple satellites into orbit and features 3D-printed liquid engines. Planned to be launched in early 2024, Vikram-1 will be Skyroot's **second rocket**, after the successful launch of the Vikram-S rocket on November 18 last year.



- According to Skyroot, the Vikram-1 vehicle would be able to deliver payloads weighing between 290-480kg, to different orbits that are 500kms above the earth.
- Being a **solid-fuelled rocket** and using relatively simpler technologies would mean that launching this vehicle would require minimal infrastructure and that the rocket can be assembled and launched within **24hours from any site**.
- The firm is also developing more versions in the Vikram series and those would involve the use of **Cryogenic engines** that are more efficient and sophisticated.
- The firm recently signed pacts with French satellite firms, indicating that they are gradually working towards **on-boarding customer satellites** for commercial launches.



An incredibly proud moment as we reveal the Vikram-1 orbital space launch vehicle, graced by Hon. MoS @DrJitendraSingh, visiting our new headquarters, the MAX-Q, which is potentially one of the world's largest private rocket factories under a single roof. Our Vikram-1, a seven-storey tall, multi-stage rocket, stands among the elite few globally with the capability to deploy orbital satellites. Stay tuned for more info on this exciting space launch vehicle!
#SkyrootAerospace #OpeningSpaceForAll



On the launch pad

Hyderabad-based Skyroot's satellite launch vehicle is called Vikram and Chennai-based Agnikul's is called Agnibaan. A look at their payloads

Vikram 1



225-315kg

Vikram 2



410-520kg

Vikram 3



580-720kg

Agnibaan



100kg

Source: Skyroot Aerospace, Agnikul Cosmos

