

SHAVIT

Satellite Launchers & Space System



Where Courage Meets Technology

SHAVIT

Launcher Main Flight Events

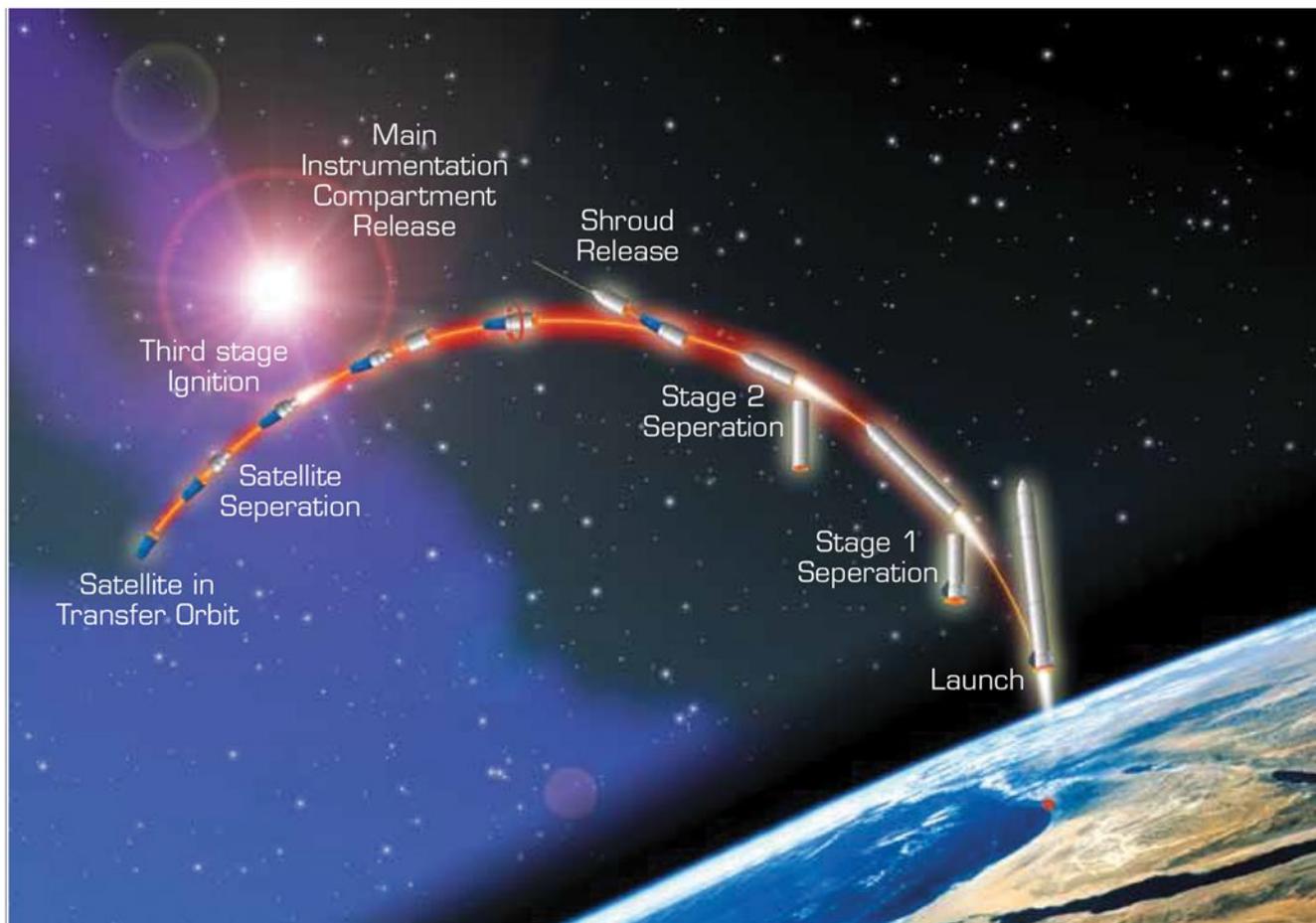
SHAVIT is a three-stage satellite launcher, powered by three solid fuel rocket motors. The first two stages lift the launcher to an altitude of about 110 km. From this point, the launcher continues to gain height while coasting, positioning itself and ejecting the satellite shroud.

At altitude of 240 km. and higher, after the separation of the main instrumentation compartment and while the launcher is spinning, the third stage motor is ignited. Thus, the satellite is inserted accurately into its transfer orbit at an altitude of approximately 250 km.

IAI/MLM's SHAVIT launcher offers various options for launching small satellites into Low Earth Orbit (LEO). The launch system is based on flight-proven hardware and software, and a unique integration and launch concept. These reduce significantly launch preparation time, and, consequently lower overall launch costs.

SHAVIT utilizes a unique set of launch preparation equipment. It is largely independent of the launch site and provides full testing capability of the launcher on the launch pad. This configuration enables satellite launch from different launch sites, according to customer requirements.

The IAI/SHAVIT launcher is operational for 25 years with the record of inserting the OFEQ satellites family into orbit from Israeli launch site.



SHAVIT Launcher Lift Capabilities

- 500 kg class satellites into 250 by 600 km elliptical polar orbit
- 300 kg class satellites into 700 km circular polar orbit

Test – Range Instrumentation Capabilities

During the process of developing the SHAVIT launcher and launch services, MLM has amassed precious system engineering experience and expertise in the test-range instrumentation domain.

These acquired capabilities were utilized for the development and implementation of an additional line of products including:

- Test-Range overall system engineering design and support.
- Mobile and Airborne telemetry stations.
- Real Time and Off-Line telemetry network stations (TSTAR) for data processing and control.
- Mobile Electronic Sky Screen (ESS) for range safety monitoring.
- Range Central Slaving System providing estimation of satellite/upper stage vehicle orbit-insertion

MLM's Solar Arrays Activities

MLM's involvement with space products includes the design and production of satellite solar panels and other various outer-space components.

- MLM is responsible for the design, analysis, production, integration and testing of solar arrays for IAI's and other customers spacecraft.
- MLM provide both body mounted and deployable solar arrays for LEO satellites.
- MLM solar Systems offers:
 - Flight proven design
 - Reliable concept
 - Adaptable to various missions and requirements



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The global market trend towards the use of smaller satellites for remote sensing, telecommunications, science and other commercial and military applications is the major motive for MLM Division of Israel Aerospace Industries (IAI) to offer orbit insertion services using its SHAVIT family of satellite launcher.

SHAVIT launcher, developed and produced by IAI/MLM Division, is used to launch Israeli's OFEQ family satellites.



MLM Division
www.iai.co.il
mlm_marketing@iai.co.il