

Third Stage Rocket Motor (TSRM)

Dual-pulse Rocket Motor with Thrust Vector Control and Integral Hybrid Attitude Control System

FACT SHEET



Product Overview

Orbital ATK is the designer and manufacturer of the high-performance Mk 136 Third Stage Rocket Motor (TSRM). TSRM features dual-pulse capability with thrust vector control and nearly 200 pounds of propellant for two burns that provides flexibility to handle a wide range of missions. TSRM also features an integrated warm gas and cold gas attitude control system. The warm gas system provides attitude control for larger navigational corrections while the cold gas system provides low-level attitude control during coast periods.

Application

Orbital ATK's TSRM propels the Standard Missile-3 (SM-3). The SM-3 is part of the Aegis Ballistic Missile Defense System and is used to intercept short-to-intermediate range ballistic missiles.

Qualification and Production Data

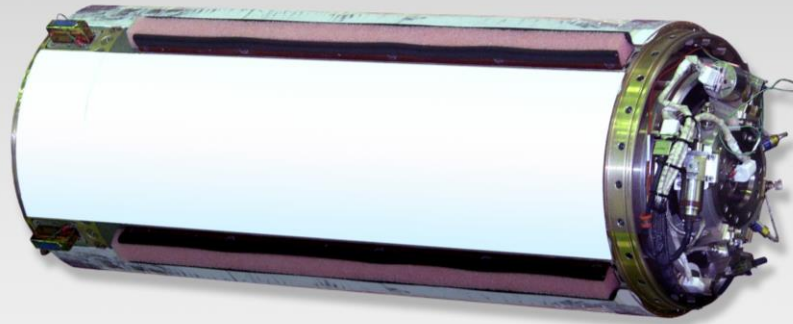
- Qualified – 2004
- Initial low-rate production – 2006 to 2008
- Full rate production – 2008 to present
- TSRMs produced – more than 270

FACTS AT A GLANCE

Features and Benefits

- Dual-pulse capability with thrust vector control
- High strength, lightweight case meets demands placed on the rocket motor
- Shipboard-safe, flight-qualified integrated stage

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Specifications

Technical Data

Weight	305 lbs (138.4 kg)
Length	35 in (889 mm)
Diameter	13.5 in (342.9 mm)

Performance Data

Service life	8 years
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Orbital ATK Capabilities

Orbital ATK is a leading edge developer and manufacturer of controllable thrust solid rocket propulsion systems that are designed and manufactured at our Elkton, Maryland facility.

The Elkton facility's 550-acre site includes nearly 400,000 square feet of enclosed manufacturing space where it can produce rocket motors up to 7 feet in diameter and nearly two million pounds of propellant each year. Orbital ATK Elkton has full static test capabilities and is ISO 9001:2008-certified and AS9100 Rev C-certified.

For more information contact:

Emily Rose Hickey
Orbital ATK Defense Systems Group
Missile Products Division
55 Thiokol Road
Elkton, MD 21921
Direct 206-909-8510