

AIM-9X Sidewinder Propulsion System



An enhanced propulsion system that allows fighter pilots a greater range of attack angles.

Overview

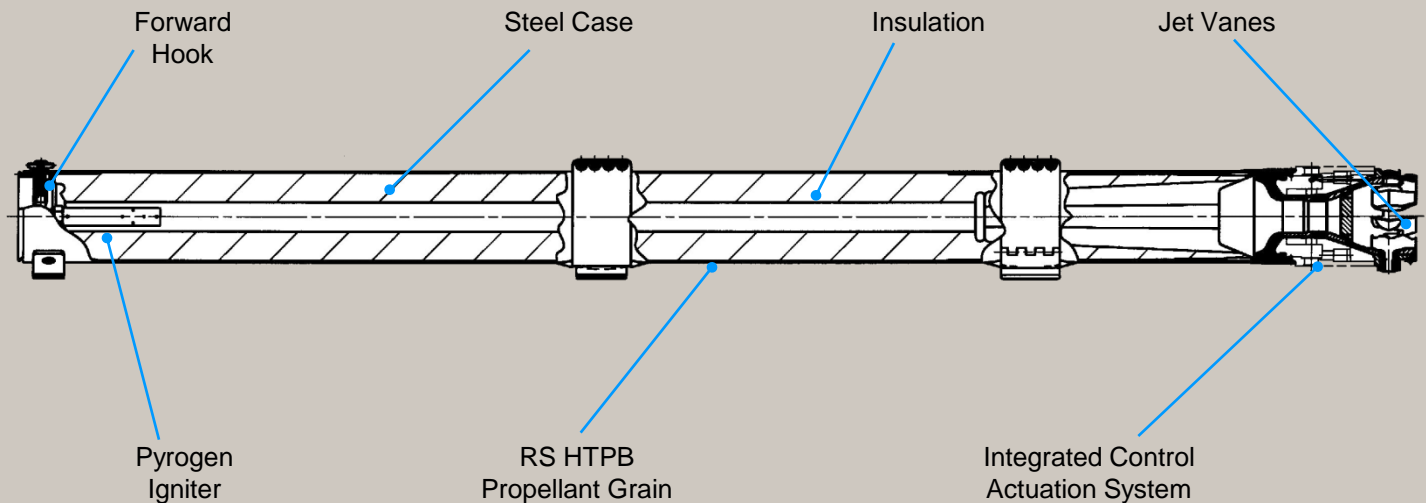
The AIM-9 Sidewinder is the premier short-range, infrared air-to-air missile system for the U.S. Air Force and U.S. Navy. The Sidewinder is also exported to NATO countries and other U.S. allies under foreign military sales. The Sidewinder's primary mission is to neutralize high performance enemy aircraft under all weather conditions. The missile is carried on a multitude of aircraft, such as the F-14, F-15, F-16, and F/A-18.

Application

The Mk 36 Sidewinder motor is a single-thrust propulsion system that incorporates a thrust vector control package for use on the AIM-9X missile to improve maneuverability. In addition, the AIM-9X Sidewinder incorporates an advanced seeker used with a helmet-mounted sight to permit a wider range of attack angles.

Development

ATK Tactical Systems Company was chosen in December 1996 by Hughes Missile Systems Company to conduct an Engineering and Manufacturing Development (EMD) program for the AIM-9X's solid propulsion rocket motor and thrust vector control system. The EMD program commenced in January 1997 and was completed in 2001. ATK is currently in full rate production phase of the AIM-9X propulsion system section.



An enhanced propulsion system that allows fighter pilots a greater range of attack angles.

FEATURES

- Qualified reduced smoke propellant
- Proven pyrogen igniter
- Cylindrical grain configuration
- Improved performance nozzle
- Integrated control actuation system
- Integrated jet vane control with in-nozzle exit cone
- Moveable aerofin control
- Improved forward hook/umbilical interface

For information contact:

ATK Tactical Propulsion & Controls

Allegany Ballistics Laboratory

210 State Route 956

Rocket Center, WV 26726

Tel: 304/726-5000

Fax: 304/726-5183

PERFORMANCE

- Temperature Limits:
 - Operating: -65°F to +145°F
 - Storage: -65°F to +145°F
- Service life: 10 years

TECHNICAL DATA

- Weight: 102.0 lbs
- Length: 78.0 in.
- Diameter: 5.0 in.
- Case: 4130 steel
- Insulator: silica filled rubber
- Nozzle: 17-4 PH SST/silica phenolic
- Propellant: reduced smoke HTPB
- Igniter: BKNO₃

Approved for public release, 11-Apr-2000.
OSR # 00-S-1575