

THE VALUE OF PERFORMANCE.

**NORTHROP GRUMMAN**

## *Attitude Control Motor*

**N**orthrop Grumman's attitude control motor (ACM) consists of a solid propellant gas generator with eight proportional valves equally spaced around the circumference of the motor. All together, the valves exert up to 7,000 lbs of steering force to the vehicle in any direction. The ACM's valve control is fully redundant. The motor has two critical functions:

- Steer Orion's launch abort system and crew module away from the launch vehicle in the event of an emergency
- Orients the capsule for parachute deployment once cleared from hazards

### ***Product Features and Benefits***

- Eight (8) high thrust proportional valves utilizing unique valve materials produced by FMI
- Single fault tolerant controller
- Reliable solid-fueled gas generator based on a heritage propellant
- Software and firmware developed in a Capability Maturity Model® Integration (CMMI®) Level 3 environment

### **Applications**

The ACM is designed for NASA's Orion crew exploration vehicle.

## Specifications

### Technical Data

Weight: 1650 lb (748.42 kg)  
Length: 62 in (1574.8 mm)  
Diameter: 32 in (812.8 mm)  
Case, External: D6AC  
Case, Internal: Aramid-filled ethylene propylene diene monomer (EPDM)  
Propellant: Carboxyl-terminated polybutadiene (CTPB) composite



Attitude Control Motor

### For more information contact:

Mike Lara  
Phone: 410-392-1111  
Mobile: 302-521-4208  
Email: michael.lara@ngc.com

**northropgrumman.com**

©2018 Northrop Grumman Corporation.  
All Rights Reserved.

Approved for public release NASA, December 15, 2009

THE VALUE OF PERFORMANCE.

**NORTHROP GRUMMAN**