

WORLD CLASS

- through people, technology and dedication

Kongsberg Gruppen ASA (KONGSBERG) is an international technology corporation that delivers advanced and reliable solutions that improve safety, security and performance in complex operations and during extreme conditions.

KONGSBERG is a customer focused organization with a worldwide performance culture. KONGSBERG works with demanding customers in the global defence, maritime, oil and gas and aerospace industries.



HIGH PROBABILITY
OF MISSION
SUCCESS

NEW GENERATION

- Long Range Precision Strike Missile System

New Generation Long Range Precision Strike Missile System

NSM is the latest generation Surface Warfare Missile System from KONGSBERG and is operational today in the Norwegian Navy.

NSM provides superior operational performance and high survivability against all of enemy soft and hard kill defence systems.

NSM provides the following key operational features:

- Operational range in excess of 200 km
- Strike capability against sea and land targets
- Excellent penetration capability against enemy air defence systems
- Ship class identification (ATR)



STEALTH AND ATR FOR THE FUTURE

NSM - Naval Strike Missile

NSM Background

The Royal Norwegian Navy (RNoN) needed missiles for their new ships.

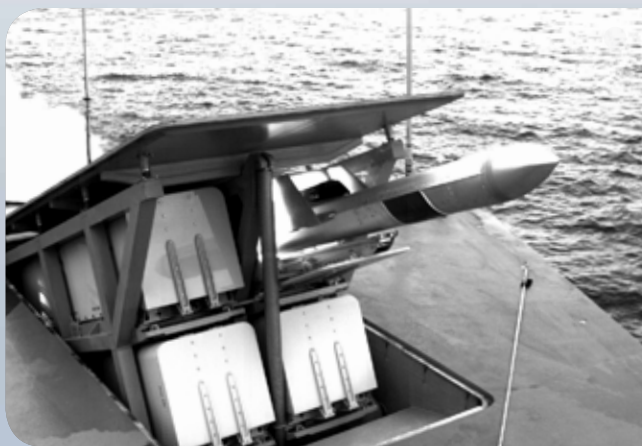
RNoN Operational Requirements :

- "Ensure that our naval units have anti ship capability, which will enable them to meet the challenges of a future ship to ship combat environment"
- "The main operational requirements call for a next generation missile with high probability of penetrating enemy air defence and be effective both in confined and open waters."
- "The missile must be easily adaptable to various platforms."

High probability of mission success:

- Superior range
- Advanced Imaging Infrared Seeker with Autonomous Target Recognition (ATR) to ship class
- Very low observable
- Super Sea Skim
- Terrain following overland flight
- Resistant to soft and hard kill defence systems
- Target hit point selectability
- Programmable fuze
- Optimized warhead effect
- Adjustable seeker logic to conform to varied ROE





KONGSBERG PROVIDES
STATE OF THE ART MISSILES
FOR SHIPS, TRUCKS, HELICOPTERS,
PATROL - AND FIGHTER AIRCRAFT

NSM

- Naval Strike Missile



NSM Status

- NSM is the main weapon for the new Norway's new frigates and coastal corvettes
- In production for Norwegian Navy and Polish Navy
- IOC in RNoN 2012

NSM Performance

The NSM has successfully demonstrated its performance.

The challenging test program included

- Missile approach from over land against target close to shoreline
- Attack from the sea with target close to shoreline
- Precision land attack

NSM Technology

Airframe

- LO airframe made in composite

Navigation

- Highly accurate INS provides precise navigation in satellite-denied environment

Terminal Guidance

- High resolution imaging infrared seeker provides ATR and precise hitpoint for each shipclass. Thrust to weight ratio above 1, the high-g shipclass programmable endgame maneuvers provide unsurpassed defence penetration capabilities

Warhead

- New titanium warhead with programmable fuze

For use

- over land
- in confined waters
- in the littorals
- on open sea

Missile Characteristics

Speed:	0.7 - 0.95 Mach
Weight:	407 kg (897 lbs)
Length:	3,96 m (156 inches)
Multi mission:	Sea and land targets
Range:	> 200 km
Responsive:	- Rapid automated mission planning – short reaction time
Lethality:	- 100 kg TNT equivalent - Programmable fuze - Scalable damage

Survivability

The NSM is designed for long range to ensure range advantages against potential hostile naval combatants.

The NSM has high survivability against modern and future Air Defence systems. This is accomplished by the following:

- passive sensors
- very low signature
- extremely low sea skimming altitude
- terrain following flight
- high agility with selectable end-game flight profiles
- very precise designated time-on-target

An advanced mission planning system utilizes all these capabilities to generate optimum engagement plans. Salvo capability, i.e. multiple missiles towards one target, is also available for highly defended, high value targets.

Lethality

The NSM warhead effect is given by three main elements; warhead size, warhead fuze and target hitpoint.

The NSM has selectable aim point in the target and has proven to hit the target

very precisely. This capability enables selection of controlled destruction effect, ranging from maximum damage to controlled/minimum damage. Terminal accuracy has been demonstrated to less than 2 feet (distance between aim point and actual hit point).

The NSM has a 500lbs class warhead with a gross weight of 120 kg and explosive weight of 100 kg (TNT equivalent). The warhead is a combined blast (primary effect) and fragmentation (secondary effect) warhead with insensitive High Explosive (HE) charge).



The warhead casing is made of titanium alloy with a steel-grid for fragmentation effect. The picture below shows the warhead effect from a test firing against a Norwegian frigate.

The fuze is programmable with custom-designed fuze programs down-loaded prior to launch.

The warhead is insensitive munition certified.



**SURVIVABLE
PRECISION STRIKE**

