

NDIA's Joint Armaments Conference, Exhibition & Firing Demo
"21st Century Weapon Systems – Providing the Right Response"

Nammo:
A Solution Provider
– Enabling the Right Response –

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Nammo

Local Presence – Global Understanding



Core Business in Support of The Warfighter



Nammo

PRECISION PEOPLE TECHNOLOGY

Core Technology

- Precision
 - Ammunition for Training and Warfighting
- Lethality
 - Our products shall be precise and minimize collateral damage
- Reliability
 - Shall always work – Thus Day & Night Solutions
- Safety
 - Safe environment for the producer and the user
 - Striving for Insensitive Munition solutions



Small Caliber Solutions – Examples:

From 5.56 → 12,7mm

- Armor Piercing
- Reduced Range (RR)
for Tactical Use
- Dim Trace:
Standard Trace and IR
100m at target above water
- Green Ammo
- Lapua .338 High Precision

Standard trace



IR



Getting On Target – Sniper Grade






- Enhancing Performance of the AMR for MP, AP-S and SG
- By improving all Components
- Our Goal:
Better Dispersion than Grade A

The 12,7mm Family – Mk 211 MP and others



Medium & Large Caliber Solutions

- MK 211
- Apex
- 30mm for Infantry vehicles
- 40mmx53HE MK285 
- Programmable Airburst 
- RA79
- Artillery and Mortars:
From 120mm IMHE to 155mm artillery 



Shoulder Fired Solutions

- M72 ASM



- M72 EC


- M72 FFE

- BDM

- SMAW II



Missile Products Solutions

- State of the Art Solid Fuel Rocket Motors
- Tail End Control Technologies to take the Missile outside the Aerodynamic Flight Envelope by using:
 - Thrust Vector Control
 - Jet Flap Technology
 - Nozzle Technology
- Example: Exocet Block II Booster 



Important Present and Future Programs

- FCT
- APEX
- AMRAAM
- SL IRIS-T

Foreign Comparative Testing

What Makes Foreign Companies Successful in FCT?

- Advocating presence in the United States
- Good relationship with the US Embassy Office of Defense Cooperation
- Strong capabilities that fulfill the needs of the US Warfighters
- If successful a great marketing tool



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APEX – Future Fighter Aircraft Ammunition

- Producer of ammunition in use on Norwegian F-16 Fighters and several other NATO-fighters
- New Fighter Aircraft
 - New Ammunition
- Unique capability
 - New Air-to-Air and Air-to-Ground Capacity
- The Norwegian MoD is funding the development and qualification of the APEX Aircraft Ammunition



NAMMO

APEX – The Multi Role Dual Purpose Round

Air-to-Air lethality capability

- Fragmentation
- Blast
- Incendiary effect

9000 ft

Air-to-ground lethality capability

- Penetration of armor
- Fragments from the penetrator

The diagram shows four penetrator shapes for different target types: HEI (High Explosive Incendiary) for soft targets, API (Armor Penetrating Incendiary) for armored targets, MP/SAPHEI (Multi-Purpose/SAPHEI) for both soft and armored targets, and APEX (Air-to-Air Penetrator Explosive) for air-to-air targets. A scale bar indicates the range from 'Soft' to 'Armoured' targets.

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Second Source on the AMRAAM Program

- Selected by Raytheon to qualify an alternative rocket motor for the AIM-120 Advanced Medium Range Air-to-Air Missile
- Shared financing by USAF, the Norwegian MoD, Innovation Norway, Raytheon and NAMMO
- In use by 36 countries
- Integrated on the F-16, F-15, F/A-18, F-22, Typhoon, Gripen, Tornado, Harrier, F-4, and the F35 JSF aircraft



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Important Present and Future Programs

- FCT
- APEX
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IRIS-T SL

- Optimizing an Air-to-Air Missile for Surface Launched Missions
- Reduced Smoke
- Introducing Composite Motor Case
- Further improved Tail End Control
 - in this case TVC



The background of the slide features a grayscale silhouette of a soldier in the foreground, standing and looking towards the right. In the background, another soldier is visible, and a military vehicle is partially seen. The scene is set against a bright, hazy sky, suggesting a field of view or a tactical situation. The overall tone is somber and focused.

Nammo's # 1 Priority

- The Warfighter
- Because all our Warfighters deserve the
World's Best Capabilities

Securing the Future

Namme



– "FREEDOM TRAILS" –

MISSION PERFORMANCE SYMPOSIUM

XIIth MP Symposium, 14-15 June 2011, Raufoss, Norway

Join us at Nammo's Booth # 411
in the Exhibition Hall

Nammo

Thank you so much for your attention!

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