

KNDS

KNDS 155mm complete round ammunition : Creating new artillery capabilities

KNDS – THE FUTURE OF EUROPEAN LAND DEFENSE

KNDS MISSION

- / Soldiers deserve what they need protecting freedom, anywhere, anytime.
- / All KNDS employees, fully aware of the complex operational environment, are dedicated to serve soldiers optimally and focused on fulfilling their operational needs, anywhere, anytime.

KNDS VISION 2030

- / KNDS, leading integrated European Land Systems group fulfilling customer requirements for proven operational excellence and value for money throughout the whole lifecycle.
- / We as prime contractor and lead system integrator and our partners develop, deliver and sustain state of the art (manned/unmanned) 'system-of-systems', complete mission solutions and/or its main sub-platforms, including the related ammunitions and services. KNDS masters (new) technology development in close cooperation with its extended network of (European) organisations and partners. KNDS applies a cross-border operating model at European level fostering industrial efficiency and assuring an optimized services network to support its customers all the way.

ASSETS



4 469
Employees



2 223
Suppliers, of which
1304 are SMEs

INNOVATION



13%
of turnover
invested in R&D



2 800
active patents in
Nexter portfolio



PRODUCT RANGE



ARTILLERY SYSTEMS

- Wheeled self-propelled
- Towed



MAIN BATTLE TANKS



INFANTRY FIGHTING VEHICLES



TROOP TRANSPORT VEHICLES



MEDIUM CALIBER GUNS AND TURRETS

- Land / Naval / Aeronautic
- 20 / 25 / 30 / 40mm

IN-SERVICE SUPPORT

FLEET MANAGEMENT

SPARE PARTS SUPPLY



BATTLE MANAGEMENT SYSTEMS



UNMANNED GROUND VEHICLES SMALL SIZE



UNMANNED GROUND VEHICLES MEDIUM SIZE



ON BOARD COMPUTER AND POWER MANAGEMENT

CENTRAL TIRE INFLATION SYSTEMS

CBRN PROTECTION / DECONTAMINATION SYSTEMS

VISION DEVICES

MECHANICAL & HYDRAULIC SYSTEMS ENGINEERING

VIRTUAL REALITY TRAINING APPLICATIONS

DISMANTLING

AMMUNITION



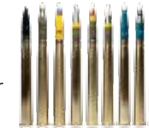
LAND

- Artillery
- Tank
- Mortar
- Medium-caliber



NAVAL

- Artillery
- Medium-caliber



AIR

- Medium-caliber



CAESAR® family

Circa 650 + Caesars in service or ordered since 2008

Soon 13 users/customers

5 War operations : Afghanistan (2009-2012), Mali (2013), Iraq (2016-2019) Ukraine (since May 2022...)



CAESAR 6x6 : First fielded in 2008 to FR (Indonesia, Morocco, Thailand, Ukraine, Armenia, Estonia etc.)

In production up to 2030 on the ARQUUS chassis, maintenance guaranteed for 30 years



CAESAR MK2 : To be fielded as of end 2025 to Belgium, France, Lithuania and other customers as of 2027



CAESAR 8x8 : DK (2021), Czech Republic (2026)

CAESAR 8x8 semi-automated version created for DK, adaptation to CZ standards.

155mm complete round ammunition : Creating new artillery capabilities



**A complete portfolio of
Ammunitions**

A complete portfolio of 155mm 52 cal munitions

Primer & Propellant



M5514



155 BCM



155 TCM

HE



155 LU107



155 LU211 B HB&BB



155 LU211 IM HB&BB



155 LU220

Smoke & light



155 LU214 SMK



155 LU217 SMK



155 LU215 ILLUM



155 LU216 ILLUM IR

Anti Tank
And PGM



155 BONUS



155 KATANA

Fuze & Fuze
Setter



PDM 728



FB557



FB375 (FOX)



FB374

LU211 : A state-of-the-art of artillery ammunition

155mm - HE LU 211 HB & BB

PERFORMANCE

- Terminal efficiency : Twice more efficient than M107
- Accuracy
- Long range
- Removable base-bleed kit
- Possible filling with TNT, Compo B or XF
- No exudation risk du to a specific sealing device (Nexter patent)

INTEROPERABILITY

- Compatible with 33, 39, 45 and 52 caliber guns, already fired with : PzH 2000 (52/Ge), FIRTINA (52/Tu), M109 A2 (39/Pak), M198 39/Pak), SBT (52/SP), K98 (52/FI), K9.

RELIABILITY

- In service in the French Army and foreign armies from a few years

COST EFFECTIVENESS

- Mass production for several armies
- Modularity



155mm HE LU 211 BB - BASE BLEED UNITS

KNDS



Modular Charges System



BCM

Bottom Charge Module



TCM

Top Charge Module

PERFORMANCE

- Fully compatible with automatic loading systems
 - Increased rate of fire
 - Allow Multiple Round Simultaneous Impacts
- Pressure waves reduced
- Compatible with 39, 45 or 52 calibre gun

ACCURACY & SAFETY

- Easier & quicker handling
- Packaging enhance life-cycle
- Meet Low-Vulnerability Ammunition initiation and propagation safety requirements

COST EFFECTIVENESS

- Simplified logistics only 2 types of module, TCM and BCM are similar in external dimensions
- Recovery of unused increments



In insensitive Munitions : A Reality

- ▶ **QUALIFIED BY THE FRENCH MOD**
- ▶ **MASS PRODUCTION UNDER WAY FOR THE FRENCH AND FOREIGN ARMIES**



155 LU217 MS SMK (Multi Spectral IR/VIS)



SMOKE EFFICIENCY

- In visible spectrum and IR bandwidth 0,7 - 12 μm .

BURN DURATION

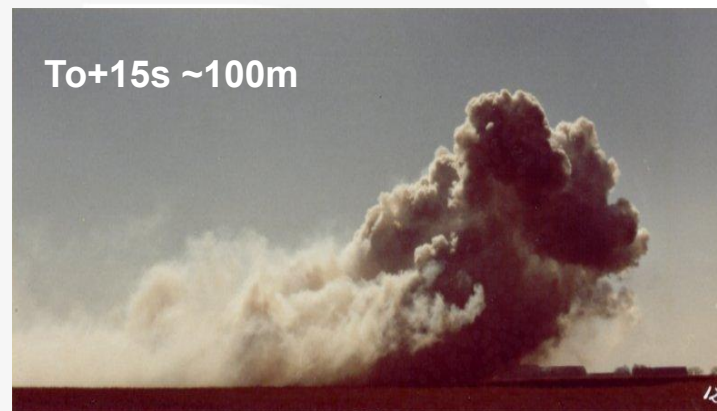
- ~ 180 sec

SCREENING AND OBSCURING OBSERVATION

- Radius 80 – 100m

STATUS

- Qualified



155 LU215 ILLUM & LU216 ILLUM IR

PERFORMANCE

- Range up to 35 km
- Operating temperature -33°C +63°C

INTEROPERABILITY

- Compliant with JBMOU Standard
- NATO standard time fuzes with 2-inch thread

SAFETY

- Compliance with NATO Safety STANAG 4224 and 4439
- REACH compliant

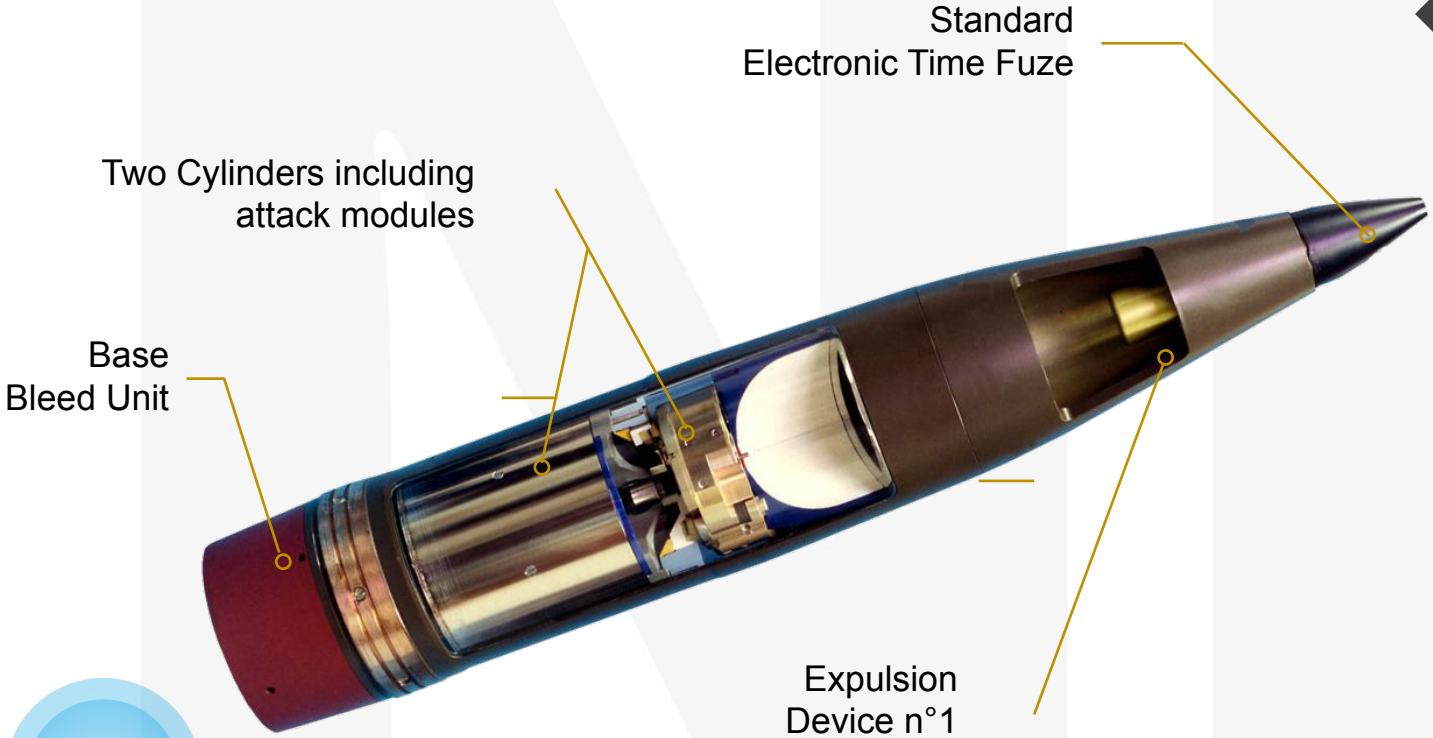
STATUS

- LU215 qualified by French MOD
- LU216 under development



155 BONUS Mk2

Top-attack artillery cargo shell for in-depth engagement of enemy



ITAR
FREE

MAIN CHARACTERISTICS

- 'Fire-and-Forget' Anti-Armour/Anti-tank Artillery Munition
- Long Range: 27 km /39 cal. & 35 km/52 cal.
- 2 Sensor Fuzed Attack Modules with dual mode detection (IR signature and 3D dimensions)
- 'Top-Attack' of armoured vehicles (MBT, SPH, APC,...) on the move or standing

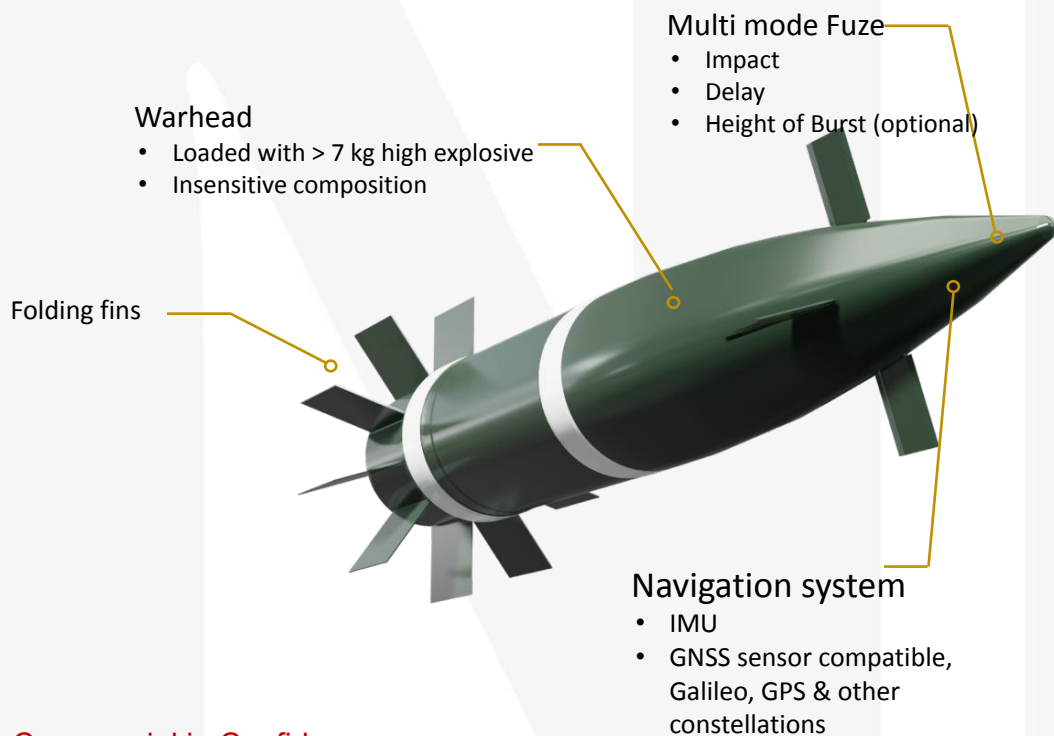
44,6 kg
without fuze

898 mm

KATANA
**An ITAR-Free Modular Precision Guided
Ammunition**

155 KATANA® 刀

ACCURATE, INDEPENDENT, FULL CALIBER



MAIN CHARACTERISTICS

ACCURACY
CEP < 10 meters

RANGE
Mk1 with Base-bleed ≥ 40km

GUIDANCE TYPE
Combined GNSS / UMI

45,6 kg
(in combat order)

1000 mm



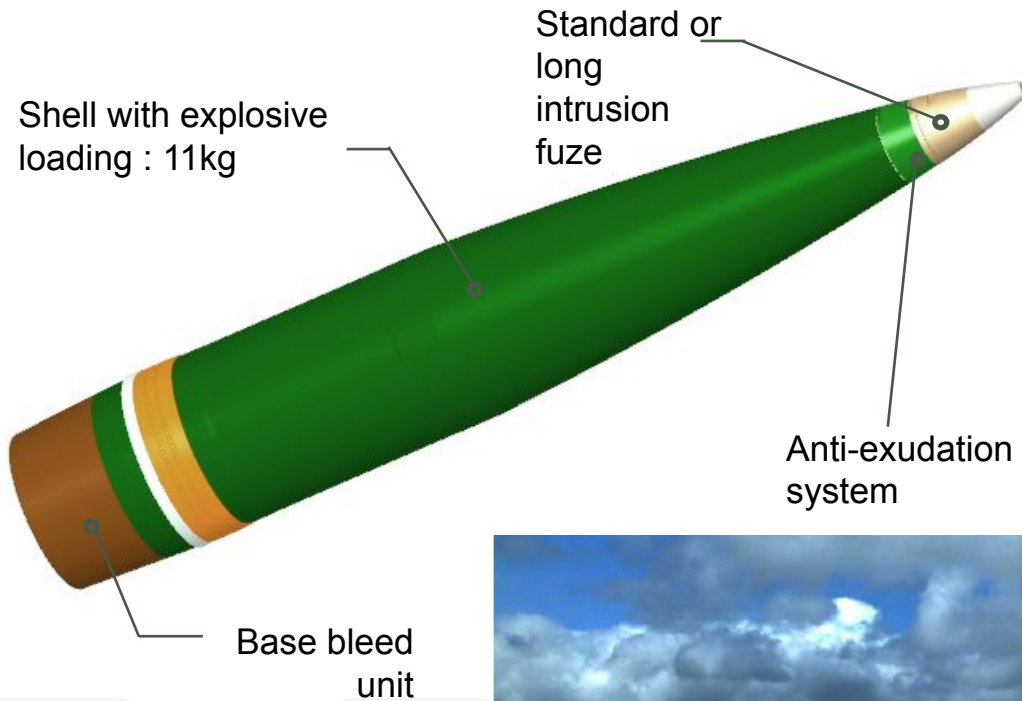
Commercial in Confidence

LU220

The Future of Long-Range Ammunition

155 LU220

OPTIMAL EFFICIENCY FOR 52CAL



MAIN CHARACTERISTICS

Long Range : more than 40km with optimized base bleed

High payload : 11kg

Compatible with all 52 cal. JBMoU systems

- High terminal efficiency for AP/AV
- Excellent performance in anti-structure effects
- Insensitive version compatible with STANAG 4439

 **45,3 kg**
in combat order

 **940 mm**

Thanks for you attention

Any questions ?