



AMMUNITION

/ CATALOGUE 2026-2027

KNDS



KNDS Belgium



KNDS Ammo France



**KNDS Ammo
Italy S.p.A**

This catalogue showcases the exhaustivity of KNDS ammunition products, with detailed specifications. Every effort has been made to ensure the exactitude of said information. Due to the nature of certain products being under development, some information can be subject to future changes. Hence, KNDS reserves the right to revise information and cannot be held responsible for any errors in this catalogue.

KNDS AMMUNITION



/ 3 EUROPEAN AMMUNITION COMPANIES

Synergic R&D, industrialization and sales capacities.



/ OUR VALUES

Fulfillment of commitments, safety, quality, team spirit, ethics and compliance.



/ EXPERIENCE

Over 100 years of ammunition design and manufacturing.

KNDS

WHY CHOOSE KNDS ?



/ STRONG HISTORY AND TECHNICAL MASTERY

For over 100 years, KNDS has been designing and manufacturing all types of ammunition for the French armed forces and export clients. KNDS ammunition masters the whole process of ammunition manufacturing, from forging to filling, until product completion.



/ COMPLETE AMMUNITION PORTFOLIO

At KNDS we design and manufacture ammunition to fulfill every mission and for all types of platforms, from medium caliber weapons to artillery systems.



/ PRODUCT PERFORMANCES

Through testing, development and innovation, we provide ammunition that offer performances matching our customers requests and we aim to continuously improve our solutions to stay on pace with modern day operational needs.

KNDS

OUR INDUSTRIAL TRANSFER OFFER

**MANUFAC-
TURING**

1

**PYRO
STORAGE**

2

**DEMILITA-
RIZATION**

3

/ KNDS EXPERTISE

Upon customer needs, KNDS has acquired a solid expertise in industrial transfer, over the round's complete life cycle, from the manufacturing process to the demilitarization of existing stockpiles. KNDS masters transfer of manufacturing for all types of ammunition for all platforms (Artillery, tank, mortar,...).

/ PYROTECHNICS HERITAGE

KNDS benefits from a rich experience in ammunition storage, monitoring and pyrotechnics safety regulations. We specify and design safe storage units to meet customers requirements and provide skilled consultancy in stockpile monitoring procedures.

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80%
of Nato
calibers

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OUR PORTFOLIO

ARTILLERY P.8

- » 155mm 
- » 105mm 

MORTAR P.26

- » 120mm 
- » 81mm 

TANK P.42

- » 120mm 
- » 105mm 
- » 90mm 
- » 76mm 

MEDIUM CALIBER P.66

- » 40 CTA  
- » 30x173  
- » 30x165 
- » 30x150  
- » 30x113  
- » 25x137 
- » 20x139   
- » 20x102   

NAVAL P.98

- » 127mm 
- » 100mm 
- » 76mm 
- » 40mm L70  

LOITERING MUNITION P.130

- » Warheads
- » Medium-range
- » Short-range

OTHER PRODUCTS P.142

- » 40mm grenades
- » GALIX

Legend:

 Army  Air Forces  Naval

ARTILLERY AMMUNITION

> 155MM

> 105MM

> FUZES



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/ 155 MM

BONUS MKII

/ MISSION

BONUS MKII is a fire and forget artillery shell designed to defeat all sort of armored vehicles and SPGs up to 35km from a modern 155mm 52 cal. JBMoU compliant system. Each round carries two independant top attack modules, allowing the user to defeat up to 2 targets per shot. Thanks to its top attack pattern, BONUS MKII offers unmatched terminal effect, defeating even modern MBTs with critical accuracy and immunity to jamming.

/ ADVANTAGES

- Compatible with all JBMoU compliant systems (CAESAR, PZH2000, K9, ...)
- Combat proven solution, showcasing unrivalled hit and destruction probability
- Attack modules fitted with 2 sensors to ensure a selective targeting
- Identical ballistic profile and firing tables as LU215, LU216, LU217



SHELL LENGTH	898mm
SHELL MASS	44.6kg
MAXIMUM RANGE (39.cal)	27km
MAXIMUM RANGE (52.cal)	35km
PAYLOAD	2 top attack modules
TARGET TYPES	Armored vehicles and SPGs
SEARCH AREA	32.000m ² / module (64.000m ² / shell)

/ 155 MM

KATANA

/ MISSION

KATANA is a guided artillery ammunition for 155mm JBMoU compliant systems for precision strikes over 45km. The shell is equipped with a combined GNSS and inertial unit guidance system paired with folding fins, allowing for trajectory correction during its flight. KATANA is filled with over 6kg of explosive payload granting excellent terminal effect for infrastructure and soft target defeat. With its decametric precision KATANA drastically reduces collateral damage risks.

/ ADVANTAGES

- Compatible with all JBMoU compliant systems (CAESAR, K9 ...) and autoloaders able to handle the ammunition size
- Explosive payload superior to comparable guided artillery shell
- ITAR free



SHELL LENGTH	~1.000mm
SHELL MASS	45.6kg
MAXIMUM RANGE	>45km
PAYLOAD	>6kg
ACCURACY	CEP< 10m
GUIDANCE	GNSS + IMU

/ 155 MM

LU 220

/ MISSION

LU 220 is KNDS newest extended range artillery shell for 155mm JBMoU compliant systems. Thanks to its elongated profile, the shell is able to carry a bigger payload, while also offering increased range. LU 220 is the best compromise between range and terminal effect. The shell also comes in an IM variant, filled with insensitive explosive, drastically improving user safety through the round's complete life cycle.

/ ADVANTAGES

- Compatible with all JBMoU compliant systems (CAESAR, K9, ...) and autoloaders able to handle the ammunition size
- Elongated profile allows for a bigger payload and longer firing range
- Perfect balance between range, terminal effect and cost
- Insensitive version available
- Compatible with long intrusion fuzes (CCF2D)
- ITAR free



SHELL LENGTH	940mm
SHELL MASS	45.3kg
PAYLOAD	~11kg of Compo B or IM expl.
MAXIMUM RANGE	~43km
MUZZLE VELOCITY	~950m/s

/ 155 MM

LU 211

/ MISSION

LU 211 is KNDS high explosive artillery shell for 155mm JBMou compliant artillery systems such as CAESAR, PZH2000, K9 and others. The shell can be equipped with a base bleed unit, reducing the projectile's drag and maximizing the shell's long range performances by reaching up to 40km. Filled with 8.8kg of explosive, the shell delivers an excellent terminal effect, even at grazing incidence. LU 211 also exists in an insensitive variant, offering increased user safety through the round's complete life cycle

/ ADVANTAGES

- Qualified on CAESAR and PZH2000 and compatible with other 155mm JBMou compliant systems: K9, M109, etc...
- LU 211 is twice as affective as a M107 shell
- Improved long range capabilities thanks to the additional base bleed unit
- Combat proven ITAR free solution in service in multiple armed forces around the world
- Insensitive version available



	LU 211 HB	LU 211 BB	LU 211 IM HB	LU 211 IM BB
SHELL LENGTH	865mm	867mm	865mm	867mm
SHELL MASS	42.5kg	43.9kg	42.5kg	43.9kg
PAYLOAD	8.8kg Composition B		8.8kg Insensitive explosive	
MAXIMUM RANGE	30km	40km	30km	40km
MUZZLE VELOCITY	939m/s	946m/s	939m/s	946m/s

/ 155 MM

L15A1/A2

/ MISSION

The L15A1 and L15A2 are designed to be fired from 39.cal, 45.cal and 52.cal 155mm howitzers. Filled with TNT or Comp. B, the shell delivers a blast and fragmentation terminal effect. L15A1 and L15A2 projectiles can be equipped with a Point detonating, Delay or Proximity fuze according to customer requirements. A target practice version with the same ballistic characteristics is available.

/ ADVANTAGES

- Compatible with all JBMoU 155mm L39, L45 and L52 standard guns
- Compo B or TNT explosive filling available
- The projectile can be fitted with a Point detonating, Proximity or Delay fuze



SHELL LENGTH	778.5mm (without fuze)
SHELL MASS	43.5kg (with fuze)
PAYLOAD	11.3kg of Compo B or TNT
MAXIMUM RANGE	24.1km (L39 gun)

/ 155 MM

LU 217 MS-SMK

/ MISSION

LU 217 is a multispectral smoke artillery shell designed for 155mm JBMoU compliant artillery systems. The shell generates a smoke screen obstructing the visible and infrared spectrum for concealment operations. The multispectral smoke screen can protect allied vehicles from laser designators and sensor guided weapons. The shell can be equipped with a base bleed unit, reducing the projectile's drag and maximizing the shell's long range performances by reaching up to 35km.

/ ADVANTAGES

- Compatible with 155mm JBMoU compliant artillery systems
- Common ballistic profile and firing tables with LU215, LU216 and BONUS MKII
- Multispectral smoke operating in the visible and infrared spectrum
- Smoke screen duration up to 210s



SHELL LENGTH	898mm
SHELL MASS	44.6kg
PAYLOAD	~5kg MS smoke compound
SMOKE EMISSION	210 seconds
MAXIMUM RANGE	35km

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/ 155 MM

LU 215 ILL

/ MISSION

LU 215 is an illumination artillery shell designed for 155mm JBMoU compliant artillery systems such as CAESAR, PZH2000, K9 and others. The shell contains an illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Upon its descent, the illumination compound is slowed down by a parachute and illuminates a large area on the battlefield. The shell can be equipped with a base bleed unit, reducing the projectile's drag and maximizing the shell's long range performances by reaching up to 35km.

/ ADVANTAGES

- Qualified on CAESAR
- Common ballistic profile and firing tables with LU216, LU217 and BONUS MKII
- The shell illuminates a 600m diameter for 80s



SHELL LENGTH	898mm
SHELL MASS	43.7kg
PAYLOAD	2.4kg illumination compound
ILLUMINATION AREA	Diameter ≥600m
ILLUMINATION DURATION	80 seconds
LUMINOSITY	≥ 1.200.000 candelas
MAXIMUM RANGE	35km

/ 155 MM

LU 216 ILL-IR

/ MISSION

LU 216 is an infrared illumination artillery shell designed for 155mm JBMoU compliant artillery systems such as CAESAR, PZH2000, K9 and others. The shell contains an infrared illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Illumination is discreet to the naked eye, but with the use of night vision devices, a 2.4km diameter illumination area is achieved. The shell can be equipped with a base bleed unit, reducing the projectile's drag and maximizing the shell's long range performances by reaching up to 35km.

/ ADVANTAGES

- Compatible with 155mm JBMoU compliant artillery systems
- Common ballistic profile and firing tables with LU215, LU216 and BONUS MKII
- The shell illuminates a 600m diameter for 80s



SHELL LENGTH	898mm
SHELL MASS	43.7kg
PAYLOAD	2.4kg IR illum compound
ILLUMINATION AREA	Diameter ≥ 2.4 km
ILLUMINATION DURATION	80 seconds
LUMINOSITY	≤ 2.500 candelas
MAXIMUM RANGE	35km

/ 155 MM

LU 107

/ MISSION

LU 107 HE is KNDS improved version of the M107 artillery shell for 155mm 39. cal artillery systems and can also be fired from 45.cal and 52.cal systems. With its improved external ballistics, LU 107 is able to reach targets up to 22km with the use of a M203 single increment charge. To meet specific customer requirements, different versions of LU 107 are available:

- Conventional explosive version
- Insensitive ammunition version (IM)
- Reduced range version for training purposes

/ ADVANTAGES

- Compatible with JBMoU compliant 39, 45 and 52.cal artillery systems.
- Upgraded version of the M107 artillery shell
- Insensitive version available to meet customer requirements
- Combat proven solution, in service in various armed forces around the world



SHELL LENGTH	700mm
SHELL MASS	42.1kg
PAYLOAD	-7kg Composition B
MAXIMUM RANGE	22.5km (with M203)
MUZZLE VELOCITY	830m/s (M203)

/ 155 MM

HE IM170 (M107)

/ MISSION

The 155mm HE IM170 (M107) is designed to be fired from 39.cal, 45.cal and 52.cal 155mm howitzers. The shell is filled with Composition B or TNT and provides a blast and fragmentation terminal effect upon detonation. The 155mm HE M107 is supplied with a lifting plug and can be equipped with a Point detonating, Delay or Proximity fuze according to customer requirements. A target practice version with the same ballistic characteristics is available.

/ ADVANTAGES

- Compatible with all JBMoU 155mm L39, L45 and L52 standard guns
- Compo B or TNT explosive filling available
- The projectile can be fitted with a Point detonating, Proximity or Delay fuze



SHELL LENGTH	605mm
SHELL MASS	43kg
PAYLOAD	6.8kg Composition B or TNT
MAXIMUM RANGE	18km (L39 gun)

/ 155 MM

MODULAR CHARGES

/ MISSION

The Modular propelling Charge System (MCS), replaces conventional propellant charges. Developed to comply with the Joint Ballistic Memorandum of Understanding (JBMoU) Annex D requirements, the Modular Charge System is suitable for use on all 155mm L39, L45 and L52 NATO standard guns (CAESAR, PZH2000, etc...) to replace bagged charges. The Modular Charge System offers handling benefits, and allows for an increased rate of fire, all while simplifying logistics, with only two types of modules.

/ ADVANTAGES

- Compatible with all JBMoU 155mm L39, L45 and L52 standard guns
- Faster and easier handling than propellant bags, offering increased rate of fire
- Reduced logistical burden
- Compliant with JBMoU annex D requirements



BCM INCREMENTS	1 to 2 modules
TCM INCREMENTS	3 to 6 (L52) or 3 to 5 (L39)

/ 105 MM

HE BB ER G3

/ MISSION

The 105mm HE BB ER G3 is an extended range artillery shell for 105mm artillery systems such as the 105LG, M119 and L119 to defeat a wide spectrum of soft targets. The shell comes equipped with a base bleed unit, drastically increasing its operational range in comparison to existing 105mm shells. allowing the user to fire at different muzzle velocities and reduce barrel wear. The propelling assembly consists of two increments of propelling charge, allowing the user to fire at different muzzle velocities as well as reduce barrel wear.

/ ADVANTAGES

- Qualified on 105LG
- Offers significant extended range capabilities to 105mm artillery systems users
- Combat proven solution
- ITAR free



SHELL LENGTH	850mm
SHELL MASS	18kg
PROJECTILE MASS	13.1kg
PAYLOAD	2.5kg Compo B
MAXIMUM RANGE	17km
MUZZLE VELOCITY	685m/s

/ 105 MM

HE M1

/ MISSION

The 105mm HE M1 artillery shell is designed to be fired from NATO standard 105mm artillery systems. The projectile delivers a lethal blast and fragmentation terminal impact upon detonation. The shell casing contains up to 7 numbered increment bags, allowing the projectile to be fired at different muzzle velocities and ranges. The projectile can be fitted with a Point detonating or Delay fuze according to customer requirements.

/ ADVANTAGES

- Compatible with M56 and M2A1 105mm howitzers
- Compo B or TNT explosive filling available
- From 1 up to 7 increment bags to fire at different muzzle velocities and ranges



SHELL LENGTH	790mm
SHELL MASS	18kg
PROJECTILE MASS	14kg
PAYLOAD	2.1kg Compo B or TNT
MAXIMUM RANGE	10.5km (in L32)
MUZZLE VELOCITY	497m/s (in L32)

/ FB 375 MK2 IM (FOX)

MULTI-OPTION ARTILLERY FUZE

/ MISSION

The FB 375 fuze is a RF proximity fuze for ammunition ranging from 76mm up to 155mm. FB 375 is equipped with a height of burst sensor as well as a PD (Point Detonating) and self destruction operating modes. The operating mode is set by means of a setting sleeve. The fuze is equipped with an electronic safety, which inhibits the proximity function before 5s of flight time.

/ ADVANTAGES

- Compatible with 105 and 155mm artillery ammunition
- Four selectable operating modes



FUZE TYPE	Electronic
FUZE MASS	930g
FUNCTIONS	Proximity, PD, Delay, Time
POWER SUPPLY	Lithium battery
MECHANICAL SAFETY DISTANCE	5s / 400 calibers
BOOSTER CHARGE MASS	21g of IM explosive

/ FB 557

MULTICALIBER FUZE

/ MISSION

The FB 557 fuze is derived from the PD M557 fuze and is designed for use on ammunition ranging from 76mm up to 155mm. FB 557 is a mechanical fuze offering two operating modes: Super quick PD (Point Detonating) and PD delay. The super quick PD mode allows for detonation upon impacting the target, while the PD delay allows for detonation 0.05s after impacting the target, ideal for infrastructure defeat. The operating mode is set by means of a switch on the side of the fuze.

/ ADVANTAGES

- Combat proven solution, in service in various armed forces
- Compatibility from 76mm up to 155mm ammunition
- Selectable double operating mode



FUZE TYPE	Mechanical
FUZE MASS	960g
MIN.OPERATING DISTANCE	variable i.a.w charge and caliber
FUZE LENGTH	96mm (152mm overall)
POWER SUPPLY	Firing force
FUNCTIONS	PD and PD delay
MECHANICAL SAFETY DISTANCE	variable i.a.w charge and caliber

/ FB 739 / FB 739A1

MULTICALIBER FUZE

/ MISSION

The FB 739A1 fuze is derived from the PD M739 fuze and is designed for use on ammunition ranging from 76mm up to 155mm. FB 739A1 is a mechanical fuze offering two operating modes: Super quick PD (Point Detonating) and PD delay. The super quick PD mode allows for detonation upon impacting the target, while the PD delay allows for detonation a few millisecond after impacting the target, ideal for infrastructure defeat. The operating mode is set by means of a switch on the side of the fuze.

The FB 739A1, compared to the FB 739 comes equipped with an anti foliage system to reduce the sensitivity of the impact sensor against rain and foliage).

/ ADVANTAGES

- > Combat proven solution, in service in various armed forces
- > Compatibility from 76mm up to 155mm ammunition
- > Selectable double operating mode
- > Anti storm and anti foliage system



FUZE TYPE	Mechanical
FUZE MASS	640g
MIN.OPERATING DISTANCE	variable i.a.w charge and caliber
FUZE LENGTH	96mm (152mm overall)
POWER SUPPLY	Firing force
FUNCTIONS	PD and PD delay
MECHANICAL SAFETY DISTANCE	variable i.a.w charge and caliber

/ PDM 728

ARTILLERY FUZE

/ MISSION

The PDM 728 fuze is designed for use on ammunition ranging from 105mm and 120mm mortars up to 155mm artillery systems. PDM 728 is a mechanical fuze offering two operating modes: Super quick PD (Point Detonating) and Delay. The super quick PD mode allows for detonation upon impacting the target, while the Delay mode allows for detonation a short time after impacting the target, ideal for infrastructure defeat. The operating mode is set by means of a switch on the side of the fuze, which can be operated by any usual screw driver.

/ ADVANTAGES

- Qualified by French MoD
- Combat proven solution, in service in various armed forces
- Compatibility from 76mm up to 155mm ammunition
- Double operating mode
- Compliant with STANAG 4187, 4157 and 4439
- ITAR free



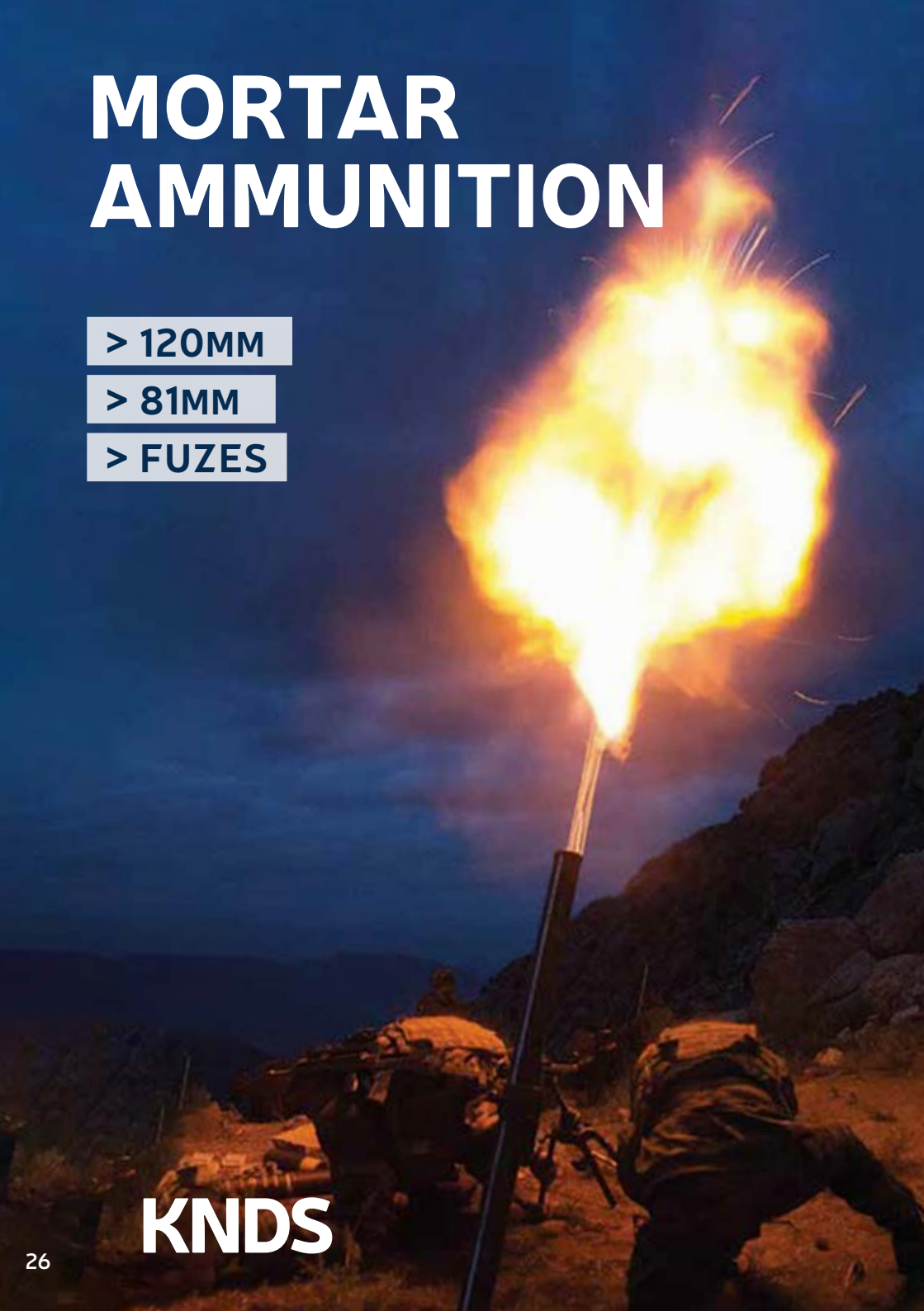
FUZE TYPE	Mechanical
MECHANICAL SAFETY DISTANCE	>200m (with 155mm)
FUNCTIONS	PD and Delay
POWER SUPPLY	Firing force
MIN.OPERATING DISTANCE	<500m (with 155mm)

MORTAR AMMUNITION

> 120MM

> 81MM

> FUZES

A large, bright orange and yellow explosion from a mortar shell dominates the upper right portion of the frame. The explosion is set against a dark blue night sky. In the foreground, two soldiers in camouflage uniforms are visible, crouching or taking cover on a rocky, uneven terrain. A mortar tube is positioned vertically, pointing towards the explosion. The overall scene is dramatic and action-oriented.

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/ 120 MM

HE

/ MISSION

The 120mm HE mortar round is designed for 120mm smoothbore mortars, in order to defeat soft targets and infrastructures thanks to its blast and fragmentation terminal effect. The round comes in different version to accommodate to the customers needs regarding the loading mechanism and primer type. Depending on the version, our 120mm HE shell can be fired from mortars such as Patria NEMO, Ruag COBRA, and any NATO standard 120mm smoothbore mortar.

/ ADVANTAGES

- M530A2 shell qualified on Patria NEMO mortar system
- Compatible with NATO standard 120mm smoothbore mortars
- HE-PRAC shells available for training purposes



	M530A1	M530A2
SHELL LENGTH	780mm	800mm
SHELL MASS	15.2kg	15.5kg
PAYLOAD	2.5kg Compo B	
MAXIMUM RANGE	8.5km	>9km
FOR USE ON	RUAG COBRA	PATRIA NEMO

/ 120 MM

HE-IM

/ MISSION

The 120mm HE-IM mortar round is designed for 120mm smoothbore mortars, in order to defeat soft targets and infrastructures thanks to its blast and fragmentation terminal effect. The round comes in different version to accommodate to the customers needs regarding the loading mechanism and primer type. The projectile is filled with an insensitive explosive payload, granting maximum user safety. Depending on the version, our 120mm HE-IM shell can be fired from mortars such as Patria NEMO, Ruag COBRA, and any NATO standard 120mm smoothbore mortar.

/ ADVANTAGES

- M590B2 shell qualified on Patria NEMO mortar system
- Compatible with NATO standard 120mm smoothbore mortars
- Insensitive explosive payload, granting maximum user safety
- HE-PRAC shells available for training purposes



	M530B1	M590B2	M580A2
SHELL LENGTH	780mm	800mm	780mm
SHELL MASS	15.2kg	15.5kg	15.2kg
PAYLOAD	2.5kg Compo B		
MAXIMUM RANGE	>7km	>9km	>9km
FOR USE ON	Towed	NEMO	AMS

/ 120 MM

MS-SMK

/ MISSION

The 120mm multispectral smoke mortar round is designed for 120mm smoothbore mortars, in order to deploy multispectral smoke screens on the battlefield. The shell generates a MS smoke screen obstructing the visible and infrared spectrum for concealment operations and can protect allied vehicles from laser designators and sensor guided weapons. The round is qualified for use on the 120mm breech loaded NEMO mortar system.

/ ADVANTAGES

- M532B1 shell qualified on Patria NEMO mortar system
- Multispectral smoke operating in the visible and infrared spectrum



	M532B1
SHELL LENGTH	780mm
SHELL MASS	15.2kg
PAYLOAD	2.1kg MS smoke compound
MAXIMUM RANGE	8.5km
MUZZLE VELOCITY	428m/s

/ 120 MM

ILL

/ MISSION

The 120mm ILL mortar round is designed for 120mm smoothbore mortars, depending on the version, it can be fired from mortars such as Patria NEMO, Ruag COBRA, and any NATO standard 120mm smoothbore mortar. The shell contains an illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Upon its descent, the illumination compound is slowed down by a parachute and illuminates a large area on the battlefield. The round comes in different version to accommodate to the customers needs.

/ ADVANTAGES

- M533A2 shell qualified on Patria NEMO mortar system
- Compatible with NATO standard 120mm smoothbore mortars, with different versions to fit muzzle loaded and breech loaded mortars.



	M533A1	M533A2	M583A1
SHELL LENGTH	780mm	800mm	780mm
SHELL MASS	15.2kg	15.5kg	15.2kg
PAYLOAD	1.2kg illumination compound (1.0 Mcd / 50s duration)		
MAXIMUM RANGE	>7km	>9km	>9km
FOR USE ON	Towed	NEMO	AMS

/ 120 MM

IR-ILL

/ MISSION

The 120mm IR-ILL mortar round is designed for 120mm smoothbore mortars, depending on the version, it can be fired from mortars such as Patria NEMO, Ruag COBRA, and any NATO standard 120mm smoothbore mortar. The shell contains an IR illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Illumination is discreet to the naked eye, but with the use of night vision devices, a large diameter illumination area is achieved. The round comes in different version to accommodate to the customers needs.

/ ADVANTAGES

- M595A2 shell qualified on Patria NEMO mortar system
- Compatible with NATO standard 120mm smoothbore mortars, with different versions to fit muzzle loaded and breech loaded mortars.
- IR illumination compound complements the use of NVGs



	M535A1	M595A2
SHELL LENGTH	780mm	800mm
SHELL MASS	15.2kg	15.5kg
PAYLOAD	1.2kg IR illumination compound	
MAXIMUM RANGE	8.5km	>9km
FOR USE ON	COBRA / Towed	NEMO

/ 120 MM

HE-PRAC

/ MISSION

The 120mm HE-PRAC mortar round is designed for training purposes on 120mm smoothbore mortars. The round comes in different version to accommodate to the customers needs regarding the loading mechanism and primer type. Depending on the version, our 120mm HE-PRAC shell can be fired from mortars such as Patria NEMO, Ruag COBRA, and any NATO standard 120mm smoothbore mortar.

/ ADVANTAGES

- M528A2 shell qualified on Patria NEMO mortar system
- Compatible with NATO standard 120mm smoothbore mortars
- Cost effective training solution
- Combat proven solutions



	M528A1	M528A2
SHELL LENGTH	780mm	800mm
SHELL MASS	15.2kg	15.5kg
MAXIMUM RANGE	>7km	>9km
FOR USE ON	Muzzle loaded	NEMO

/ 81 MM

HE LR / HE-IM LR

/ MISSION

The 81mm HE LR and HE-IM LR mortar rounds are designed for low, medium and high pressure 81mm smoothbore mortars, in order to defeat soft targets and infrastructures thanks to their blast and fragmentation terminal effect. The HE-IM LR round is filled with an insensitive explosive payload, granting improved user safety. The tail assembly is fitted with the ignition cartridge and the "horseshoe" type propellant charge increments, from 2 for low pressure mortars up to 5 for high pressure mortars.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A1, M252/L16A1 and equivalents
- Insensitive version available
- Combat proven solutions



	HE LR	HE-IM LR
SHELL LENGTH	510mm	510mm
SHELL MASS	4.2kg	4.2kg
PAYLOAD	0.8kg Compo B	0.8kg insensitive explosive
MAXIMUM RANGE	5.5km (high pressure)	5.5km (high pressure)

/ 81 MM

ILL LR

/ MISSION

The 81mm ILL LR mortar round is designed for low, medium and high pressure 81mm smoothbore mortars. The shell contains an illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Upon its descent, the illumination compound is slowed down by a parachute and illuminates a large area on the battlefield. The tail assembly is fitted with the ignition cartridge and the "horseshoe" type propellant charge increments, from 2 for low pressure mortars up to 5 for high pressure mortars.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A1, M252/L16A1 and equivalents
- Identical ballistic profile and flight performances as the IR-ILL LR round



SHELL LENGTH	630mm
SHELL MASS	4.4kg
PAYLOAD	700g IR illum compound
ILLUMINATION DURATION	55 second
LUMINOSITY	600.000candelas
MAXIMUM RANGE	4.05km (high pressure)

/ 81 MM

IR-ILL LR

/ MISSION

The 81mm IR-ILL LR mortar round is designed for low, medium and high pressure 81mm smoothbore mortars. The shell contains an IR illumination compound which is ejected during the shell's flight thanks to a chronometric fuze. Illumination is discreet to the naked eye, but with the use of night vision devices, a large diameter illumination area is achieved. The tail assembly is fitted with the ignition cartridge and the "horseshoe" type propellant charge increments, from 2 for low pressure mortars up to 5 for high pressure mortars

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A1, M252/L16A1 and equivalents
- Identical ballistic profile and flight performances as the ILL LR round



SHELL LENGTH	630mm
SHELL MASS	4.4kg
PAYLOAD	700g IR illum compound
ILLUMINATION DURATION	55 second
INFRARED BAND	0.7-1.2µm
MAXIMUM RANGE	4.05km (high pressure)

/ 81 MM

HE-TP LR

/ MISSION

The 81mm HE-TP LR mortar round is designed for training purposes on low, medium and high pressure 81mm smoothbore mortars. The Projectile can be fitted with 2 to 5 “horseshoe” propelling charge increments depending on the mortar type. Upon impact, the point detonating fuze, causing a small pyrotechnic charge to ignite, generating a spotting flash and sound similar to the combat round, while greatly reducing risks from fragmentation and blast effects.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A1, M252/ L16A1 and equivalents
- Designed to match the flight performances of the HE LR round, making it a cost-effective and safe training solution



SHELL LENGTH	513mm
SHELL MASS	4.2kg
PAYLOAD	Inert
MAXIMUM RANGE	5.5km (high pressure)

/ 81 MM MORTAR BOMB

HE

/ MISSION

The 81mm HE mortar bomb is a high explosive indirect fire ammunition, effective against light structures, vehicles, non-armored assets and infantry troops, due to its natural fragmentation and blast. It is a High Explosive round, loaded with Composition B, developed to be fired with M1, M29/M29A, M252, L16 series and 81mm-MX-KM mortar systems and their equivalent.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A, M252/L16 series and equivalents
- Equipped with a Point Detonating fuze



SHELL LENGTH	515mm
SHELL MASS	4.5kg
PAYLOAD	850g Comp.B
MAXIMUM RANGE	7km (high pressure)
FUZE	Point Detonating
LETHAL RADIUS	>22m

/ 81 MM MORTAR BOMB

ILL

/ MISSION

The 81mm Illumination Mortar Bomb is used for illuminating a desired area, developed to be used with M1, M29, M252, L16, 81-MX2-KM Mortar Systems, or equivalent. The round consists of a tubular steel body and tail cone with a plastic obturating band, a mechanical time fuze and an aluminium tail assembly. It contains an expelling charge (black powder), the illuminating canister and a parachute.

/ ADVANTAGES

- > Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A, M252/L16 series and equivalents
- > Equipped with a Mechanical time fuze



SHELL LENGTH	650mm
SHELL MASS	4.5kg
PAYLOAD	Illumination compound
ILLUMINATION DURATION	>30 seconds
ILLUM. INTENSITY	900kcd
MAXIMUM RANGE	4.8km (high pressure)

/ 81 MM MORTAR BOMB

IR-ILL

/ MISSION

This Mortar Bomb is an Infrared Illuminating bomb developed to be used in the L16 Mortar Systems, or equivalent. The Infrared Illuminating Bomb represents a major step forward for 81mm mortar system technology. The IR technology offers troops in the field greatly enhanced visibility for night time operations and allows friendly forces to effectively observe the environment through night vision equipment.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as L16 Mortar systems and equivalent systems
- Equipped with a mechanical time fuze
- IR-Illumination compound offers enhanced visibility for troops equipped with night vision equipment



SHELL LENGTH	650mm
SHELL MASS	4.5kg
PAYLOAD	Infrared illumination compound
ILLUMINATION DURATION	>50 seconds
LUMINOSITY	250W/Steradians
MAXIMUM RANGE	4.8km (high pressure)

/ 81 MM MORTAR BOMB

HE-TP

/ MISSION

The 81mm HE-TP mortar bomb can be used with low, medium and high-pressure mortars (M1, M9, M252, series L16 and EXPAL81-MXM-KK) for training practice. The bomb is equipped with a Point Detonating fuze and a spotting charge in order to mark and identify the point of impact on the target. The 81mm HE-TP mortar bomb has same weight and inertial characteristics that guarantees the same ballistics as the 81mm HE mortar bomb.

/ ADVANTAGES

- Compatible with low, medium and high pressure 81mm smoothbore mortars such as M1, M29/M29A, M252/L16 series and equivalents
- Identical ballistic profile and flight performances as the 81mm HE mortar bomb



SHELL LENGTH	515mm
SHELL MASS	4.5kg
PAYLOAD	800g inert compound
SPOTTING CHARGE	8g RDX composition
MAXIMUM RANGE	7km (high pressure)

TANK AMMUNITION

> 120MM

> 105MM

> 90MM

> 76MM



KNDS

/ 120 MM

SHARD APFSDS

/ MISSION

The 120mm SHARD (Solution for Hardened ARmor De-feat) is KNDS newest generation APFSDS round for MBTs equipped with a NATO 120mm smoothbore gun. By implementing an elongated tungsten penetrator and a state of the art lightweight sabot, the kinetic energy projectile offers a significant increase in penetration and terminal effect, allowing the user to defeat the last generation of MBTs. Fitted with a REACH compliant proven propulsion system, barrel wear is reduced by 25% despite SHARD unmatched performances.

/ ADVANTAGES

- > Already fired from Leclerc (L52) and Leopard 2 (L44/L55)
- > ITAR free solution
- > +15% penetration compared to existing APFSDS rounds
- > Reduced barrel wear
- > Propelling charge assembly REACH compliant.



Tank

SHELL LENGTH	984mm	
SHELL MASS	22kg	
PROJECTILE MATERIAL	Cobalt free tungsten alloy	
MAX OPERATIONAL RANGE	>4.000m	
MUZZLE VELOCITY	Leclerc: 1.720m/s	Leopard 2: 1.735m/s
DISPERSION	≤0.2 mils	
PRIMER	Electrical	

KNDS

/ 120 MM

CAN

/ MISSION

The 120mm CAN (cannister) ammunition can be fired by the Leclerc, Leopard 2, Abrams M1 (A1 and A2) and other MBTs fitted with a 120mm smoothbore gun.

The 120mm CAN provides the MBT crews with a very effective close-defense solution against various threats, such as dismounted infantry or UAVs while limiting collateral damage risks. The projectile consists in an aluminum body containing approximately 1.100 tungsten spheres. Upon firing, the tungsten spheres are spread in a forward cone shape, with an effective range of 400 to 600m.

/ ADVANTAGES

- > Compatible with all NATO MBTs equipped with a 120mm smoothbore gun
- > Ideal solution to defeat exposed soft targets such as UAVs and dismounted infantry
- > Compliant with STANAG 4385 and MOPI AEP 26 requirements
- > In service in the French armed forces



SHELL LENGTH	761mm
SHELL MASS	22.5kg
PROJECTILE MASS	11.5kg
PROJECTILE FILLING	approx. 1.100 tungsten spheres
MAX OPERATIONAL RANGE	400 to 600m
MUZZLE VELOCITY	1.410m/s
PRIMER	Electrical

/ 120 MM

HE F1

/ MISSION

120mm HE F1 is designed for soft and protected targets defeat on MBT equipped with a NATO standard 120mm smoothbore gun. The 120mm HE is designed to defeat reinforced concrete structures, light armored vehicles and infantry on the battlefield, with the ability to operate at high grazing incidence. The shell comes equipped with a tail assembly consisting of 6 deployable fins, increasing the projectile stability for longer range firing. When paired with SHARD, the 120mm HE F1 allows MBT crews to defeat a wide spectrum of targets on the modern battlefield.

/ ADVANTAGES

- > Already fired from Leclerc (L52) and Leopard 2 (L44/L55)
- > Delivers its excellent blast and fragmentation terminal effect regardless of the angle of impact
- > Double safety system granting maximum user safety
- > ITAR free solution



Tank

SHELL LENGTH	945mm
SHELL MASS	27kg
PROJECTILE MASS	16.8kg
PROJECTILE FILLING	3kg
MAX OPERATIONAL RANGE	>4.000m
MUZZLE VELOCITY	1.050m/s
DISPERSION	≤0.35 mils
PRIMER	Electrical

KNDS

/ 120 MM

TPFSDS

/ MISSION

The 120mm TPFSDS (Target Practice Fin Stabilized Discarding Sabot) is designed for MBT crew training, simulating the flight performances of an APFSDS round. The penetrator is fitted with a tail cone assembly, reducing the round's effective range, making it ideal for training purposes.

/ ADVANTAGES

- > Already fired from Leclerc (L52) and Leopard 2 (L44/L55)
- > ITAR free solution
- > Reduced range projectile, ideal for smaller training fields
- > Cost effective solution for MBT crew training



SHELL LENGTH	900mm
SHELL MASS	18kg
PROJECTILE MATERIAL	Steel
PROJECTILE MASS	6.1kg
MAX OPERATIONAL RANGE	3.000m
MUZZLE VELOCITY	1.750m/s
DISPERSION	≤0.25 mils
PRIMER	Electrical

/ 120 MM

HEAT-TP

/ MISSION

The 120mm HEAT-TP is KNDS training solution for MBT crew training, designed to be fired by MBTs equipped with a 120mm smoothbore gun such as the LECLERC, Leopard 2, M1 Abrams and equivalent systems. The inert projectile replicates the firing effect of a 120mm HE shell without any terminal effect upon impact

/ ADVANTAGES

- > Already fired from Leclerc (L52) and Leopard 2 (L44/L55)
- > ITAR free solution
- > Reduced range projectile, ideal for smaller training fields
- > Cost effective solution for MBT crew training



SHELL LENGTH	983mm
SHELL MASS	24.3kg
PROJECTILE MASS	14.4kg
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.100m/s
DISPERSION	≤0.25 mils
PRIMER	Electrical

/ 105 MM

APFSDS-T

/ MISSION

The 105mm APFSDS-T is KNDS armor piercing fin stabilized discarding sabot tracer round designed for US M68, UK L7, and other STANAG 4458 compliant tank guns. The high-density fin-stabilized tungsten penetrator offers maximum muzzle velocity and ballistic stability, ensuring improved accuracy and penetration at extended ranges for armored target defeat.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1



	M1060A2	M1060A3
SHELL LENGTH	990mm	1.000mm
SHELL MASS	18.5kg	18.7kg
PROJECTILE MASS	6.2kg	6.2kg
PENETRATION (RHA at 2.000mm /60° obliquity)	440mm	>500mm
MAX OPERATIONAL RANGE	~2.500m	~2.500m
MUZZLE VELOCITY	1.460m/s	1.560m/s
DISPERSION	0.25mils	0.25mils
PRIMER	Electrical	Electrical

KNDS

/ 105 MM

HE

/ MISSION

The 105mm HE is KNDS high explosive round for designed for soft target and infrastructure defeat on the US M68, UK L7, and other STANAG 4458 compliant tank guns. The projectile is filled with Composition B and is equipped with a point detonating fuze, allowing for projectile detonation upon impact with the target.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- Solution for soft target defeat



Tank

SHELL LENGTH	998mm
SHELL MASS	23kg
PROJECTILE MASS	12.1kg
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	700m/s
PRIMER	Electrical

KNDS

/ 105 MM

HEP-T

/ MISSION

The 105mm HEP-T (HESH-T) is KNDS high explosive squash head round designed for US M68, UK L7, and other STANAG 4458 compliant tank guns. The shell is filled with plastic explosive and equipped with a base mounted delayed action fuze. Upon target impact, the projectile is “squashed” covering a wide surface of its target and milliseconds later detonates, creating an important shockwave, spreading through the target.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- The HEP-T shell is ideal for reinforced concrete structure defeat
- HEP-TP-T training round available with a matching ballistic profile and flight performances



SHELL LENGTH	940mm
SHELL MASS	20.6kg
PROJECTILE MASS	11.2kg
PROJECTILE FILLING	3.0kg Compo B
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	731m/s
DISPERSION	0.3 mils
PRIMER	Electrical

/ 105 MM

HEP-IM-T

/ MISSION

The 105mm HEP-IM-T (HESH-IM-T) is KNDS high explosive squash head round designed for US M68, UK L7, and other STANAG 4458 compliant tank guns. The shell is filled with insensitive explosive offering improved user safety and equipped with a base mounted delayed action fuze. Upon target impact, the projectile is “squashed” covering a wide surface of its target and milliseconds later detonates, creating an important shockwave, spreading through the target.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- The HEP-IM-T shell is ideal for reinforced concrete structure defeat
- Insensitive explosive filling allows for increased user safety
- HEP-TP-T training round available with a matching ballistic profile and flight performances
- STANAG 4439 compliant



Tank

SHELL LENGTH	940mm
SHELL MASS	20.9kg
PROJECTILE MASS	11.5kg
PROJECTILE FILLING	3.3kg insensitive explosive
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	731m/s
DISPERSION	0.3 mils
PRIMER	Electrical

KNDS

/ 105 MM

HEAT-MP-T

/ MISSION

The 105mm HEAT-MP-T is KNDS high explosive anti tank round designed for US M68, UK L7, and other STANAG 4458 compliant tank guns. The shell is filled with a high explosive shaped charge with a copper liner. Upon target impact, the copper liner is turned into a high-velocity jet, able to penetrate armored targets.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- The HEP-IM-T shell is ideal for reinforced concrete structure defeat
- Insensitive explosive filling allows for increased user safety
- HEAT-TP-T training round available with a matching ballistic profile and flight performances
- STANAG 4439 compliant



	M393A3-E	L51HEP-T
SHELL LENGTH	1.001mm	992mm
SHELL MASS	22.2kg	22.1kg
PROJECTILE MASS	10.5kg	10.25kg
FILING	1.1kg Comp.B	0.97kg Comp.B
MUZZLE VELOCITY	1.173m/s	1.173m/s

/ 105 MM

TPFSDS-T

/ MISSION

The 105mm TPFSDS-T (Target Practice Fin Stabilized Discarding Sabot Tracer) is designed for crew training on US M68, UK L7, and other STANAG 4458 compliant tank guns, by simulating the flight performances of an APFSDS-T round. The steel penetrator is fitted with a tail fin assembly, improving the round's stability and accuracy.

/ ADVANTAGES

- Compatible with 105mm STANAG 4458 compliant tank guns such as US M68 and UK L7
- Replicates the flight performances of 105mm APFSDS-T
- Equipped with a steel penetrator, offering a cost-efficient training solution
- In service solution



Tank

SHELL LENGTH	962mm
SHELL MASS	17.2kg
PROJECTILE MASS	5.2kg
PROJECTILE MATERIAL	Steel
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.505m/s
DISPERSION	0.3 mils
PRIMER	Electrical

KNDS

/ 105 MM

TPCSDS-T

/ MISSION

The 105mm TPCSDS-T (Target Practice Cone Stabilized Discarding Sabot Tracer) is designed for crew training on US M68, UK L7, and other STANAG 4458 compliant tank guns, by simulating the flight performances of an APFSDS-T round. The steel penetrator is fitted with a tail cone assembly, reducing the round maximum range.

/ ADVANTAGES

- Compatible with 105mm STANAG 4458 compliant tank guns such as US M68 and UK L7
- Replicates the flight performances of 105mm APFSDS-T
- Tail cone assembly reduces the round maximum range, making it ideal for smaller training fields
- Equipped with a steel penetrator, offering a cost-efficient training solution
- In service solution



SHELL LENGTH	962mm
SHELL MASS	17.3kg
PROJECTILE MASS	5.2kg
PROJECTILE MATERIAL	Steel
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.475m/s
DISPERSION	0.3 mils
PRIMER	Electrical

/ 105 MM

HEAT-TP-T

/ MISSION

The 105mm HEAT-TP is designed for tank crew training, simulating the flight performances of the HEAT-T round. The inert projectile is used to provide cost effective marksmanship and live firing training for tank crews. The round is fitted for US M68, UK L7, and other STANAG 4458 compliant tank guns.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- Same ballistic profile and flight performances as HEAT-MP-T
- Cost-effective training solution for tank crews



Tank

	M490A1	L51 TP-T
SHELL LENGTH	995mm	999mm
SHELL MASS	22.2kg	21.5kg
PROJECTILE MASS	10.5kg	10.25kg
FILING	Inert	
MUZZLE VELOCITY	1.173m/s	1.125m/s

/ 105 MM

HESH-TP-T

/ MISSION

The 105mm HESH-TP (HEP-T) is designed for tank crew training, simulating the flight performances of the HEP-T and HEP-IM-T rounds. The inert projectile is used to provide cost effective marksmanship and live firing training for tank crews. The round is fitted for US M68, UK L7, and other STANAG 4458 compliant tank guns.

/ ADVANTAGES

- Compatible with 105mm tank guns such as US M68 and UK L7, mounted on M60 and Leopard 1
- Same ballistic profile and flight performances as HEAT-MP-T
- Cost-effective training solution for tank crews



SHELL LENGTH	948mm
SHELL MASS	13.7kg
PROJECTILE MASS	7.5kg
PROJECTILE FILLING	Inert
MUZZLE VELOCITY	709m/s
DISPERSION	0.42 mils
PRIMER	Mechanical (percussion)

/ 90 MM MK8

APFSDS-T

/ MISSION

The 90mm MK8 APFSDS-T is KNDS armor piercing fin stabilized discarding sabot tracer round designed for the Cockerill 90mm MKVIII gun and equivalents. The high-density fin-stabilized tungsten penetrator offers maximum muzzle velocity and ballistic stability, ensuring improved accuracy and penetration at extended ranges for armored target defeat.

/ ADVANTAGES

- Compatible with Cockerill 90mm MKVIII gun and equivalents
- 90mm APFSDS-T round available with a matching ballistic profile, offering a cost-efficient training solution



Tank

SHELL LENGTH	977mm
SHELL MASS	12.5kg
PROJECTILE MASS	3.6kg
PENETRATION	150mm RHA at 2000m / 60° obliquity
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.330m/s
DISPERSION	0.32mils
PRIMER	Mechanical (percussion)

KNDS

/ 90 MM MK8

HESH-T

/ MISSION

The 90mm MK8 HESH-T is KNDS high explosive squash head round designed Cockerill 90mm MKVIII tank gun and equivalents. The shell is filled with Composition A3 explosive and equipped with a base mounted delayed action fuze. Upon target impact, the projectile is “squashed” covering a wide surface of its target and milliseconds later detonates, creating an important shockwave, spreading through the target.

/ ADVANTAGES

- Compatible with Cockerill 90mm MKVIII gun and equivalents
- The HESH-T round is ideal for reinforced concrete structure defeat
- 90mm HESH-TP-T round available with a matching ballistic profile, offering a cost-efficient training solution



SHELL LENGTH	948mm
SHELL MASS	14.4kg
PROJECTILE MASS	7.7kg
PROJECTILE FILLING	1.9kg Compo A3
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	712m/s
DISPERSION	0.42 mils
PRIMER	Mechanical (percussion)

/ 90 MM MK8

HESH-IM-T

/ MISSION

The 90mm MK8 HESH-IM-T is KNDS high explosive squash head round designed Cockerill 90mm MKVIII tank gun and equivalents. The shell is filled with insensitive explosive, offering increased user safety and equipped with a base mounted delayed action fuze. Upon target impact, the projectile is “squashed” covering a wide surface of its target and milliseconds later detonates, creating an important shockwave, spreading through the target.

/ ADVANTAGES

- Compatible with Cockerill 90mm MKVIII gun and equivalents
- The HESH-IM-T round is ideal for reinforced concrete structure defeat
- Insensitive explosive filling allows for increased user safety
- 90mm MK8 HESH-TP-T round available with a matching ballistic profile, offering a cost-efficient training solution



Tank

SHELL LENGTH	948mm
SHELL MASS	14.7kg
PROJECTILE MASS	8kg
PROJECTILE FILLING	2.2kg insensitive explosive
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	712m/s
DISPERSION	0.42 mils
PRIMER	Mechanical (percussion)

KNDS

/ 90 MM MK8

HESH-TP-T

/ MISSION

The 90mm MK8 HESH-TP-T is designed for tank crew training, simulating the flight performances of the HESH-T and HESH-IM-T rounds. The inert projectile is used to provide cost effective marksmanship and live firing training for tank crews. The round is fitted for Cockerill 90mm MKVIII gun and equivalent tank guns.

/ ADVANTAGES

- Compatible with Cockerill 90mm MKVIII gun and equivalents
- Same ballistic profile and flight performances as the 90mm MK8 HESH-T and HESH-IM-T combat rounds, offering a cost-effective solution for crew training



SHELL LENGTH	948mm
SHELL MASS	13.7kg
PROJECTILE MASS	7.5kg
PROJECTILE FILLING	Inert
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	709m/s
DISPERSION	0.42 mils
PRIMER	Mechanical (percussion)

/ 90 MM MK8

TPFSDS-T

/ MISSION

The 90mm TPFSDS-T (Target Practice Fin Stabilized Discarding Sabot Tracer) is designed for crew training on the Cockerill 90mm MKVIII tank gun, by simulating the flight performances of an APFSDS-T round. The steel penetrator is fitted with a tail fin assembly, improving the round's stability and accuracy.

/ ADVANTAGES

- Compatible with Cockerill 90mm MKVIII gun and equivalents
- Same ballistic profile and flight performances as the 90mm MK8 APFSDS-T combat round, offering a cost-effective solution for crew training



SHELL LENGTH	956mm
SHELL MASS	11.5kg
PROJECTILE MASS	3.2kg
PROJECTILE MATERIAL	Steel
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.360m/s
DISPERSION	0.3 mils
PRIMER	Mechanical (percussion)

/ 76 MM

HE-T

/ MISSION

The 76mm HE-T is KNDS high explosive round for designed for soft target and infrastructure defeat on the L5A1, L23/23A1 and other 76mm tank guns, mounted on Saladin and Scorpion light tanks. The projectile is filled with Composition B and is equipped with an M739 point detonating fuze.

/ ADVANTAGES

- Compatible with L5A1, L23/23A1 and other 76mm guns mounted on light tanks and armored vehicles such as the Saladin and Scorpion
- 76mm HESH-TP-T round available with matching ballistic profile and identical flight performances
- Combat proven solution, in service in multiple armed forces worldwide.



SHELL LENGTH	535mm
SHELL MASS	7.7kg
PROJECTILE MASS	5.6kg
PROJECTILE FILLING	0.7kg Compo B
MAX OPERATIONAL RANGE	> 2.500m
MUZZLE VELOCITY	514m/s
DISPERSION	0.5 mils
PRIMER	Mechanical (percussion)

/ 76 MM

HESH-T

/ MISSION

The 76mm HESH-T is KNDS high explosive squash head round for designed for soft target and infrastructure defeat on the L5A1, L23/23A1 and other 76mm tank guns, mounted on Saladin and Scorpion light tanks. The projectile is filled with Composition B and is equipped with an M739 point detonating fuze.

/ ADVANTAGES

- Compatible with L5A1, L23/23A1 and other 76mm guns mounted on light tanks and armored vehicles such as the Saladin and Scorpion
- Combat proven solution, in service in multiple armed forces worldwide.



Tank

SHELL LENGTH	540mm
SHELL MASS	7.7kg
PROJECTILE MASS	5.6kg
PROJECTILE FILLING	1.2kg Compo B
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	533m/s
DISPERSION	0.5 mils
PRIMER	Mechanical (percussion)

KNDS

/ 76 MM

HESH-TP-T

/ MISSION

The 76mm HESH-TP-T is KNDS training round for designed crew training on the L5A1, L23/23A1 and other 76mm tank guns, mounted on Saladin and Scorpion light tanks. Round replicates the ballistic profile and flight characteristics of the 76mm HESH-T round, with no terminal effect upon impact.

/ ADVANTAGES

- Compatible with L5A1, L23/23A1 and other 76mm guns mounted on light tanks and armored vehicles such as the Saladin and Scorpion
- Replicates the ballistic profile and flight characteristics of the 76mm HESH-T round
- Cost effective solution for crew training



SHELL LENGTH	540mm
SHELL MASS	7.7kg
PROJECTILE MASS	5.6kg
PROJECTILE FILLING	Inert
MAX OPERATIONAL RANGE	> 2.500m
MUZZLE VELOCITY	533m/s
DISPERSION	0.5 mils
PRIMER	Mechanical (percussion)

MEDIUM CALIBER AMMUNITION

> 40MM

> 30MM

> 25MM

> 20MM



KNDS

/ 40MM CT

APFSDS-T

/ MISSION

The 40mm CT APFSDS-T is a high performance kinetic energy armor-piercing projectile designed for the 40mm CTAS weapon system, fitted on the EBRC Jaguar, Rapidfire and Ajax IFV, to defeat light and heavy armored targets at extended ranges. The fin-stabilized tungsten penetrator offers a penetration power far superior than other medium caliber weapons, up to 3km+ while offering low volume clutter thanks to its case-telescoped design.

/ ADVANTAGES

- Qualified on 40mm CTAS weapon system, fitted on Jaguar, Rapidfire and Ajax IFV
- Best in class penetration, range and terminal effect, far superior to 30x173mm APFSDS and on par with a 90mm tank gun
- Reduced amount of shots needed to defeat a wide spectrum of armored targets
- Low volume clutter
- Linkless ammunition, allowing for faster shell changes
- ITAR free solution



Medium Cal.

CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	1.9kg
PROJECTILE MASS	550g
PENETRATION	140mm RHA at 1.500m / 60° obliquity
MAX OPERATIONAL RANGE	>3.000m
MUZZLE VELOCITY	1.510m/s
DISPERSION	≤0.3 mils
PRIMER	Mechanical (percussion)

KNDS

/ 40MM CT

GPR-PD-T

/ MISSION

The 40mm CT GPR-PD-T (General Purpose Round-Point Detonating Tracer) is a multipurpose high explosive round designed for the 40mm CTAS weapon system, fitted on the EBRC Jaguar, Rapidfire and Ajax IFV. With the projectile being fitted inside the casing, this round offers low volume clutter. Thanks to its best in class explosive payload mass, the GPR-PD-T delivers an excellent terminal effect against soft targets, light armored vehicles and reinforced concrete structures, at extended range..

/ ADVANTAGES

- Qualified on 40mm CTAS weapon system, fitted on Jaguar, Rapidfire and Ajax IFV
- Penetration of a 210mm reinforced concrete wall at 1.000m
- Best in class explosive payload mass
- Low volume clutter
- Linkless ammunition, allowing for faster shell changes
- ITAR free solution



CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	2.4kg
PROJECTILE MASS	980g
PROJECTILE FILLING	115g
MAX OPERATIONAL RANGE	>2.500m
MUZZLE VELOCITY	1.000m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)

/ 40MM CT

GPR-AB-T

/ MISSION

The 40mm CT GPR-AB-T (General Purpose Round-Air-BurstTracer) is a multipurpose high explosive round designed for the 40mm CTAS weapon system, fitted on the EBRC Jaguar, Rapidfire and Ajax IFV. With the projectile being fitted inside the casing, this round offers low volume clutter. Thanks its best in class explosive payload mass, the GPR-AB-T delivers an excellent terminal effect against soft targets, light armored vehicles and reinforced concrete structures, at extended range or behind cover target thanks to its airburst detonation mode.

/ ADVANTAGES

- > Designed for 40mm CTAS weapon system, mounted on Jaguar, Rapidfire and Ajax IFV
- > Base mounted chronometric fuze allows for airburst detonation and offers C-UAV capabilities
- > Penetration of a 210mm reinforced concrete wall at 1.000m
- > Linkless ammunition, allowing for faster shell changes
- > ITAR free solution

CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	2.4kg
PROJECTILE MASS	980g
PROJECTILE FILLING	115g
MAX OPERATIONAL RANGE	>2.500m
MUZZLE VELOCITY	1.000m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)



Medium Cal.

KNDS

/ 40MM CT

A3B

/ MISSION

The 40mm CT A3B (Anti-Aircraft AirBurst) is designed for the 40mm CTAS weapon system to provide the user with an improved anti-air capability. The projectile is fitted with a base mounted chronometric fuze and delivers a 600g tungsten payload with a frontal terminal effect, increasing hit probability at extended ranges, making it the ideal solution for the defeat of a wide spectrum of air targets such as UAVs, helicopters, aircrafts and missiles as well as dismounted infantry.

/ ADVANTAGES

- Designed for the 40mm CTAS weapon system
- Frontal terminal effect, creating a lethal cone of pellets, drastically increasing hit probability
- Increased operational range, reaching up to 4km
- Reduced amount of shots fired needed to defeat a wide spectrum of air and ground targets
- Linkless ammunition, allowing for faster shell changes
- ITAR free solution



CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	3kg
PROJECTILE MASS	1.4kg
PROJECTILE FILLING	600g Tungsten payload
MAX OPERATIONAL RANGE	4.000m
MUZZLE VELOCITY	900m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)

/ 40MM CT

TP-T

/ MISSION

The 40mm CT TP-T is a dual purpose training and combat round designed for use in the 40mm CTAS weapon system. Equipped with an inert projectile, the 40mm CT TP-T provides the armed forces with a cost-effective training solution. The round can also be used as a kinetic energy projectile, used to defeat light armored targets and non-reinforced infrastructures.

/ ADVANTAGES

- > Qualified on 40mm CTAS weapon system, fitted on Jaguar, Rapidfire and Ajax IFV
- > Identical ballistic profile to GPR-PD-T and GPR-AB-T, making it an ideal cost effective solution for crew training
- > Low volume clutter
- > Linkless ammunition, allowing for faster shell changes
- > ITAR free solution



Medium Cal.

CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	2.4kg
PROJECTILE MASS	980g
MAX OPERATIONAL RANGE	>2.500m
MUZZLE VELOCITY	1.000m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)

KNDS

/ 40MM CT

TPRR-T

/ MISSION

The 40mm CT TPRR-T (Target Practice Reduced Range Tracer) is a training round designed for use in the 40mm CTAS weapon system. Fitted with a lightweight projectile and a reduced quantity of propellant, the TPRR-T provides the armed forces with a cost-effective short range training solution, with low barrel pressure and low barrel wear.

/ ADVANTAGES

- Designed for 40mm CTAS weapon system, mounted on Jaguar, Rapidfire and Ajax IFV
- The TPRR-T shares identical flight performances as the GPR-PD-T, GPR-AB-T and TP-T up to 900m
- Shorter range than 40 CT TP-T, ideal for smaller training fields
- Low volume clutter
- Linkless ammunition, allowing for faster shell changes
- ITAR free solution



CARTRIDGE LENGTH	255mm
CARTRIDGE MASS	1.9kg
PROJECTILE MASS	730g
MAX OPERATIONAL RANGE	900m
MUZZLE VELOCITY	1.000m/s
PRIMER	Mechanical (percussion)

/ 30X173MM

APFSDS-T

/ MISSION

The 30x173mm APFSDS-T round is KNDS high-performance kinetic energy armor-piercing projectile designed for 30x173mm automatic weapon systems. The high-density fin-stabilized tungsten penetrator offers maximum muzzle velocity and ballistic stability, ensuring improved accuracy and penetration at extended ranges. KNDS 30x173mm APFSDS-T round provides armed forces with a highly effective combat proven solution for defeating modern armored threats, qualified on the Bushmaster II MK44 automatic weapon system, fitted on NATO IFVs.

/ ADVANTAGES

- Qualified on Bushmaster II MK44 automatic weapon system.
- 30x173mm TPFSDS-T round available with a matching ballistic profile, offering a cost-efficient training solution
- Combat proven solution, in service in multiple armed forces worldwide.
- STANAG 4624 compliant.
- Propelling charge assembly REACH compliant.



Medium Cal.

CARTRIDGE LENGTH	290mm
CARTRIDGE MASS	530g
PROJECTILE MASS	220g
PENETRATION	>50mm RHA at 2000m / 60° obliquity
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.430m/s
DISPERSION	≤ 0.44 mils
PRIMER	Mechanical (percussion)

KNDS

/ 30X173MM

HEI-T

/ MISSION

The 30x173mm HEI-T round, designed for 30x173mm automatic weapon systems delivers a lethal blast, fragmentation and incendiary terminal effect against soft targets such as light vehicles, dismounted infantry and light infrastructures. The point detonating fuze comes with a double safety feature and a self-destruction mode, granting improved user safety throughout the round complete life cycle. KNDS 30x173mm HEI-T round provides armed forces with a highly effective solution for defeating a wide spectrum of soft targets, qualified on Bushmaster II MK44.

/ ADVANTAGES

- Qualified on Bushmaster II MK44 automatic weapon system
- 30x173mm TP-T round available with a matching ballistic profile, offering a cost-efficient training solution
- Combat proven solution, in service in multiple armed forces worldwide.



CARTRIDGE LENGTH	290mm
CARTRIDGE MASS	670g
PROJECTILE MASS	363g
PROJECTILE FILLING	36g RDX
MAX OPERATIONAL RANGE	2.500m
MUZZLE VELOCITY	1.070m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)

KNDS

/ 30X173MM

MF-ABM

/ MISSION

The MF-ABM (Multi-Fragmentation Air Burst Munition) is designed to be fired by all 30x173mm gun equipped with the relative setter. This ammunition has been designed to be used in several operative scenarios, to counter aerial targets such as drones, micro-drones and loitering munitions and for land application. The MF-ABM is equipped with a programmable nose fuze and a backup Point detonating sensor, to ignite the HE (High Explosive) payload in case of an impact with the target. The MF-AB Munition has a high effective lethality, given by the Multi-Fragmentation projectile, that is able to project a huge pre-formed frontal fragments cloud and, thanks to a HE payload, a massive natural fragmentation of the high quality steel shell.

/ ADVANTAGES

- > Excellent terminal effect against UAS targets thanks to the airburst function and fragmentation effect
- > Programmable Airburst mode with a Point detonating backup mode
- > Frontal and lateral fragmentation
- > Propelling charge assembly REACH compliant.



Medium Cal.

CARTRIDGE LENGTH	290mm
PROJECTILE FILLING	Composition made of RDX
MUZZLE VELOCITY	1070m/s
PRIMER	Mechanical (percussion)
MAX OPERATIONAL RANGE	~2.500m
FRAGMENTS	Steel (preformed + shell fragmentation)
FUZE	Programmable AB and PD
FRAGMENTATION	Frontal + lateral

KNDS

/ 30X173MM

TPFSDS-T

/ MISSION

The 30x173mm TPFSDS-T (Target Practice Fin Stabilized Discarding Sabot Tracer) is designed for crew training, simulating the flight performances of the 30x173mm APFSDS-T round. The steel penetrator is fitted with a tail fin assembly, offering improved round stability and flight performances. The shell is qualified on Bushmaster II MK44 weapon system.

/ ADVANTAGES

- Qualified on Bushmaster II MK44 automatic weapon system
- Matches the ballistic profile and flight performances of KNDS 30x173mm APFSDS-T combat round, offering a cost-efficient training solution
- Propelling charge assembly REACH compliant.



CARTRIDGE LENGTH	290mm
CARTRIDGE MASS	500g
PROJECTILE MASS	190g
PRIMER	Mechanical (percussion)
MAX OPERATIONAL RANGE	~1.000m
MUZZLE VELOCITY	1.470m/s
DISPERSION	≤0.44 mils

/ 30X173MM

TP-T

/ MISSION

The 30x173mm TP-T (Target Practice Tracer) is designed for crew training, simulating the flight performances of the 30x173mm HEI-T round without any explosive terminal effect upon impact. The shell is qualified on Bushmaster II MK44 weapon-system.

/ ADVANTAGES

- > Qualified on Bushmaster II MK44 automatic weapon system
- > Matches the ballistic profile and flight performances of KNDS 30x173mm HEI-T combat round, offering a cost-efficient training solution
- > Propelling charge assembly REACH compliant.



Medium Cal.

CARTRIDGE LENGTH	290mm
CARTRIDGE MASS	670g
PROJECTILE MASS	363g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.070m/s
DISPERSION	≤0.6 mils
PRIMER	Mechanical (percussion)

KNDS

/ 30x165MM

APFSDS-T

/ MISSION

The 30x165mm APFSDS-T round is KNDS high-performance kinetic energy armor-piercing projectile designed for ex-Soviet and Russian 30x165mm automatic weapon systems, mounted on BMP variants. The high-density fin-stabilized tungsten penetrator offers maximum muzzle velocity and ballistic stability, ensuring improved accuracy and penetration at extended ranges. The shell provides armed forces operating 30x165mm weapon systems with a highly effective solution for defeating modern armored threats.

/ ADVANTAGES

- Designed for 2A42 and 2A72 weapon systems, fitted on BMP-2 and numerous others IFVs and APCs
- 30x165mm TPFSDS-T round available with a matching ballistic profile, offering a cost-efficient training solution



CARTRIDGE LENGTH	290mm
CARTRIDGE MASS	530g
PROJECTILE MASS	220g
PENETRATION	>50mm RHA at 2000m / 60° obliquity
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.430m/s
DISPERSION	≤0.6 mils
PRIMER	Mechanical (percussion)

KNDS

/ 30x165MM

TPFSDS-T

/ MISSION

The 30x165mm TPFSDS-T (Target Practice Fin Stabilized Discarding Sabot Tracer) is designed for crew training, simulating the flight performances of the 30x165mm APFSDS-T round. The shell is designed to be fired from ex-Soviet and Russian 30x165mm automatic weapon systems such as 2A42 and 2A72 mounted on BMP-2 and other platforms.

/ ADVANTAGES

- Designed for 2A42 and 2A72 weapon systems, fitted on BMP-2 and numerous others IFVs and APCs
- Matches the 30x165mm ballistic profile and flight performances, offering a cost effective training solution



Medium Cal.

CARTRIDGE LENGTH	293mm
CARTRIDGE MASS	675g
PROJECTILE MASS	220g
PENETRATION	Steel
MUZZLE VELOCITY	1.360m/s
DISPERSION	≤0.5 mils
PRIMER	Mechanical (percussion)

KNDS

/ 30x150MM

SAPHEI

/ MISSION

The 30x150mm SAPHEI round is KNDS multi-purpose round qualified on the Rafale 30M791 automatic weapon system. The round delivers a lethal blast, fragmentation and incendiary terminal effect against a wide spectrum of ground and aerial targets. The round comes equipped with an electrical 1A/1W primer, offering improved reliability and safety, even in electromagnetically charged conditions. KNDS 30x150mm SAPHEI round provides Rafale users with a highly effective combat proven solution for defeating air and ground based light armored targets with consistent efficiency.

/ ADVANTAGES

- Qualified on 30M791 automatic weapon, fitted on the Rafale fighter jet
- TP round available with a matching ballistic profile and flight performances
- Combat proven solution, in service in French Air Force and other worldwide.
- 1A/1W electrical primer, ideal for high altitude consistent performances and safety in electromagnetically charged conditions



CARTRIDGE LENGTH	250mm
CARTRIDGE MASS	455g
PROJECTILE MASS	275g
PROJECTILE FILLING	30g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.025m/s
DISPERSION	≤0.6 mils
PRIMER	Electrical (1A/1W)

KNDS

/ 30x150MM

TP

/ MISSION

The 30x150mm TP round is KNDS training round qualified on the Rafale 30M791 automatic weapon system. The round comes equipped with an electrical 1A/1W primer, offering improved reliability and safety, even in electromagnetically charged conditions. KNDS 30x150mm TP round provides Rafale users with a cost-effective training solution matching the 30x150mm ballistic and flight performances.

/ ADVANTAGES

- Qualified on 30M791 automatic weapon, fitted on the Rafale fighter jet
- 30x150mm TP matches the ballistic profile and flight performances of KNDS 30x150mm SAPHEI combat round, offering a cost-efficient training solution
- 1A/1W electrical primer, ideal for high altitude consistent performances and safety in electromagnetically charged conditions



Medium Cal.

CARTRIDGE LENGTH	250mm
CARTRIDGE MASS	455g
PROJECTILE MASS	275g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.070m/s
DISPERSION	≤0.6 mils
PRIMER	Electrical (1A/1W)

KNDS

/ 30x113MM

HEI-AB / C-UAV

/ MISSION

The 30x113mm HEI-AB (High Explosive Incendiary - AirBurst) round is KNDS airburst round designed for the 30M781 MPG automatic weapon system, to defeat a wide spectrum of air threats such as UAVs and land targets such as dismounted infantry and light infrastructures. The nose mounted chronometric fuze allows for airburst detonation to defeat air threats while also offering a point detonating operating mode for ground target defeat.

/ ADVANTAGES

- Compatible with 30M781 MPG automatic weapon system for counter unmanned system defeat
- Part of KNDS complete 30x113mm family, offering combat rounds to tackle every mission
- 30x113mm TP-T and TP round available with a matching ballistic profile, offering a cost-efficient training solution



CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	490g
PROJECTILE MASS	275g
PROJECTILE FILLING	30g
MAX OPERATIONAL RANGE	~1.000m (Airburst)
MUZZLE VELOCITY	775m/s
DISPERSION	H+L ≤ 50cm at 100m
PRIMER	Electrical (1A/1W)
SAFETY DISTANCE	15m

/ 30x113MM

SAPHEI

/ MISSION

The 30x113mm SAPHEI round is KNDS multi-purpose round designed for 30x113mm automatic weapon systems fitted on ground platforms and helicopter turrets. The round offers improved armor penetration and delivers a lethal blast, fragmentation and incendiary terminal effect against a wide spectrum of ground and aerial targets. KNDS 30x113mm SAPHEI round provides armed forces with a highly effective and safe solution for defeating modern light armored threats on NATO standard 30x113mm automatic weapon systems.

/ ADVANTAGES

- 52N electrical primer version qualified on DEFA 30mm automatic weapon system
- 1A/1W electrical primer version qualified on 30M781 automatic weapon system
- SSF (Supersafe) version available with 1A/1W electrical primer, LOVA propellant and IM explosive
- Excellent penetration and explosive incendiary terminal effect, ideal for soft and light armored target defeat



Medium Cal.

CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	490g
PROJECTILE MASS	275g
PROJECTILE FILLING	16g
MAX OPERATIONAL RANGE	~2.000m
MUZZLE VELOCITY	775m/s
DISPERSION	H+L ≤ 50cm at 100m
PRIMER	Electrical (1A/1W or 52N)

KNDS

/ 30x113MM

HEI

/ MISSION

The 30x113mm HEI round is KNDS high explosive incendiary round designed for 30x113mm automatic weapon systems fitted on ground platforms helicopter turrets and aircrafts. The round delivers a lethal blast and fragmentation terminal effect against soft targets such as dismounted infantry and light infrastructures. KNDS 30x113mm HEI round provides armed forces with a highly effective combat proven solution for defeating modern threats, on DEFA and 30M781 30mm weapon systems.

/ ADVANTAGES

- Compatible with DEFA 30mm automatic weapon and other 30x113mm weapon systems
- Available with 1A/1W electrical primer, for use on 30M781 automatic weapon system
- Excellent blast and fragmentation terminal effect, ideal for soft target defeat



CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	490g
PROJECTILE MASS	275g
PROJECTILE FILLING	25g
MAX OPERATIONAL RANGE	~2.000m
MUZZLE VELOCITY	775m/s
DISPERSION	H+L ≤ 50cm at 100m
PRIMER	Electrical (1A/1W or 52N)

/ 30x113MM

TP-T / TP

/ MISSION

The 30x113mm TP and TP-T are cost-effective training rounds for 30x113mm automatic weapon systems. The rounds come equipped with an electrical primer, designed for extreme cold and high-altitude performances. The 30x113mm TP and TP-T rounds provide the armed forces with a cost-efficient training solution for NATO 30x113mm weapon systems mounted on fighter jets, helicopters and turrets on various ground platforms.

/ ADVANTAGES

- Compatible with DEFA 30mm automatic weapon and other 30x113mm weapon systems
- Available with 1A/1W electrical primer, qualified on 30M781 weapon system
- Both rounds match the ballistic profile and flight performances of KNDS 30x113mm HEI, HEI-AB and SAPHEI combat rounds, offering a cost-efficient training solution



Medium Cal.

CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	490g
PROJECTILE MASS	275g
MAX OPERATIONAL RANGE	~1.800m
MUZZLE VELOCITY	775m/s
DISPERSION	H+L ≤ 50cm at 100m
PRIMER	Electrical (1A/1W or 52N)

KNDS

/ 25x137MM

APFSDS-T

/ MISSION

The 25x137mm APFSDS-T round is a high-performance kinetic energy armor-piercing projectile designed for 25x137mm automatic weapon systems. The high-density fin-stabilized tungsten penetrator, mounted in a lightweight discarding sabot offers improved penetration against modern armored targets. Thanks to its high muzzle velocity and ballistic stability, the round delivers increased accuracy at extended ranges. KNDS 25x137mm APFSDS-T round provides armed forces with a highly effective combat proven solution for defeating a wide range of modern armed threats.

/ ADVANTAGES

- Compatible with M242 Bushmaster, GIAT M811, Oerlikon KBA and other 25mm weapon systems
- 25x137mm APFSDS-T round available with a matching ballistic profile, offering a cost-efficient training solution
- STANAG 4173 compliant



CARTRIDGE LENGTH	223mm
CARTRIDGE MASS	450g
PROJECTILE MASS	130g
PENETRATION	>30mm RHA at 2000m / 60° obliquity
MAX OPERATIONAL RANGE	~3.500m
MUZZLE VELOCITY	1.440m/s
DISPERSION	≤0.6 mils
PRIMER	Mechanical (percussion)

KNDS

/ 25x137MM

HEI-T

/ MISSION

The 25x137mm HEI-T is a multi-purpose high explosive incendiary round designed for 25x137mm automatic weapon systems. The round delivers a lethal blast, fragmentation and incendiary terminal effect against soft targets such as light vehicles, dismounted infantry and light infrastructures. The point detonating fuze assembly comes with a double safety feature and a self-destruction mode, granting improved user safety. KNDS 25x137mm HEI-T round provides armed forces with a highly effective combat proven solution for defeating a wide range of soft targets.

/ ADVANTAGES

- Compatible with M242 Bushmaster, GIAT M811, Oerlikon KBA, GAU-12, GAU-22 and other 25mm weapon systems
- 25x137mm TP-T and TP-RR-T rounds available with a matching ballistic profile, offering cost-efficient training solutions
- Combat proven solution, in service in French armed forces and others around the world



Medium Cal.

CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	500g
PROJECTILE MASS	183g
PROJECTILE FILLING	27g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.100m/s
DISPERSION	≤0.8 mils
PRIMER	Mechanical (percussion)

KNDS

/ 25x137MM

TPFSDS-T

/ MISSION

The 25x137mm TPFSDS-T is a cost-effective training round for 25x137mm automatic weapon systems. The fin-stabilized steel penetrator, mounted in a lightweight discarding sabot, thanks to its high muzzle velocity and ballistic stability, offers exceptional accuracy. KNDS 25x137mm TPFSDS-T round provides armed forces with a training round matching the combat round ballistic profile and flight performances, while ensuring complete interoperability with NATO standard 25x137mm weapon systems.

/ ADVANTAGES

- Compatible with M242 Bushmaster, GIAT M811, Oerlikon KBA and other 25mm weapon systems
- 25x137mm TPFSDS-T matches the ballistic profile and flight performances of KNDS 25x137mm APFSDS-T combat round, offering a cost-efficient training solution



CARTRIDGE LENGTH	223mm
CARTRIDGE MASS	450g
PROJECTILE MASS	112g
MAX OPERATIONAL RANGE	~1.000m
MUZZLE VELOCITY	1.440m/s
DISPERSION	≤0.6 mils
PRIMER	Mechanical (percussion)

/ 25x137MM

TP-T

/ MISSION

The 25x137mm TP-T is a cost-effective training round for 25x137mm automatic weapon systems. KNDS 25x137mm TP-T round provides armed forces with a training round matching the combat round ballistic profile and flight performances with no terminal effect upon impact, while ensuring complete interoperability with NATO standard 25mm weapon systems mounted on IFVs, LAVs and Aircrafts.

/ ADVANTAGES

- Compatible with M242 Bushmaster, GIAT M811, Oerlikon KBA, GAU-12, GAU-22 and other 25mm weapon systems
- 25x137mm TP-T matches the ballistic profile and flight performances of KNDS 25x137mm HEI-T combat round, offering a cost-efficient training solution
- Combat proven solution, in service in French armed forces and others around the world



Medium Cal.

CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	500g
PROJECTILE MASS	183g
MAX OPERATIONAL RANGE	2.500m
MUZZLE VELOCITY	1.100m/s
DISPERSION	≤0.8 mils
PRIMER	Mechanical (percussion)

KNDS

/ 25x137MM

TP-RR-T

/ MISSION

The 25x137mm TP-T is a cost-effective training round for 25x137mm automatic weapon systems. KNDS 25x137mm TP-T round provides armed forces with a training round matching the combat round ballistic profile and flight performances with no terminal effect upon impact, while ensuring complete interoperability with NATO standard 25mm weapon systems mounted on IFVs, LAVs and Aircrafts.

/ ADVANTAGES

- Compatible with M242 Bushmaster, GIAT M811, Oerlikon KBA, GAU-12, GAU-22 and other 25mm weapon systems
- 25x137mm TP-RR-T offers a reduced firing range compared to the TP-T, making it ideal for smaller training ranges



CARTRIDGE LENGTH	200mm
CARTRIDGE MASS	500g
PROJECTILE MASS	183g
MAX OPERATIONAL RANGE	1.500m
MUZZLE VELOCITY	1.100m/s
DISPERSION	≤0.8 mils
PRIMER	Mechanical (percussion)

/ 20x139MM

HEI-T / HEI

/ MISSION

The 20x139mm HEI-T and HEI rounds is KNDS multi-purpose round designed for 20x139mm automatic weapon systems fitted on naval turrets, aircrafts and helicopters. The round delivers a lethal blast, fragmentation and incendiary terminal effect against soft targets such as light vehicles, dismounted infantry and light infrastructures. KNDS 20x139mm HEI-T and HEI rounds provide armed forces operating the 20M693, Rh-202 and similar automatic weapon systems with a highly effective combat proven solution for defeating a wide spectrum of soft targets.

/ ADVANTAGES

- Qualified on 20M693, mounted on the Narwhal turret, compatible with Rh-202 and similar 20x139mm automatic weapon systems
- TP-T / TP versions available with matching ballistic profile and flight performances
- Combat proven solution, in service in French armed forces and others around the world



Medium Cal.

CARTRIDGE LENGTH	213mm
CARTRIDGE MASS	315g
PROJECTILE MASS	120g
PROJECTILE FILLING	9.5g (HEI), 6g (HEI-T)
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.050m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Mechanical (percussion)

KNDS

/ 20x139MM

AP-T

/ MISSION

The 20x139mm APT is an armor piercing round designed for 20x139mm automatic weapon systems fitted on naval turrets, light armored vehicles and anti-aircraft mounts. The projectile is fitted with a tungsten core, allowing for improved armor penetration capability. KNDS 20x139mm AP-T round provides armed forces operating the 20M693, Rh-202 and similar automatic weapon systems with a highly effective combat proven solution for defeating modern threats.

/ ADVANTAGES

- Compatible with 20M693, Rh-202 and similar 20x139mm automatic weapon systems, fitted on naval turrets, light armored vehicles and anti-aircraft mounts
- TP-T / TP versions available for cost-effective training solutions
- Combat proven solution, in service in French armed forces and others around the world



CARTRIDGE LENGTH	213mm
CARTRIDGE MASS	305g
PROJECTILE MASS	111.5g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.100m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Mechanical (percussion)

/ 20x139MM

TP / TP-T

/ MISSION

The 20x139mm TP-T and TP round are KNDS target practice rounds designed for 20x139mm automatic weapon systems. The rounds provide armed forces operating the 20M693, Rh-202 and similar automatic weapon systems with a cost-effective training solution.

/ ADVANTAGES

- Qualified on 20M693, mounted on the Narwhal turret, compatible with Rh-202 and similar 20x139mm automatic weapon systems
- Similar flight performances as the combat rounds



CARTRIDGE LENGTH	213mm
CARTRIDGE MASS	315g
PROJECTILE MASS	120g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	1.050m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Mechanical (percussion)

Medium Cal.

KNDS

/ 20x102MM

AP-T

/ MISSION

The 20x102mm AP-T is an armor piercing round designed for 20x102mm automatic weapon systems fitted on naval turrets, aircrafts and helicopters. The projectile is fitted with a tungsten core, allowing for improved armor penetration capability. KNDS 20x102mm AP-T round provides armed forces operating the 20M621 and other 20x102mm automatic weapon systems with a highly effective solution to defeat armored threats.

/ ADVANTAGES

- Compatible with 20M621 and other NATO equivalent 20x102mm weapon systems
- TP-T / TP versions available for cost-effective training solutions
- Combat proven solution, in service in French armed forces and others around the world



CARTRIDGE LENGTH	168mm
CARTRIDGE MASS	272g
PROJECTILE MASS	106g
PENETRATOR MATERIAL	Tungsten
MAX OPERATIONAL RANGE	~1.500m
MUZZLE VELOCITY	1.005m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Electrical

/ 20x102MM

HEI

/ MISSION

The 20x102mm HEI round is KNDS multi-purpose round designed for 20x102mm automatic weapon systems fitted on naval turrets, aircrafts and helicopters. The round delivers a lethal blast, fragmentation and incendiary terminal effect against soft targets such as light vehicles, dismounted infantry and light infrastructures. KNDS 20x102mm HEI round provides armed forces with a highly effective combat proven solution for defeating modern threats, qualified on the 20M621 20mm automatic weapon system, fitted on the Narwhal turret and THL20 helicopter turret.

/ ADVANTAGES

- Qualified on 20M621, mounted on the Narwhal turret
- Compatible with NATO equivalent 20x102mm weapon systems
- TP-T / TP versions available with matching ballistic profile and flight performances
- Combat proven solution, in service in French armed forces and others around the world



Medium Cal.

CARTRIDGE LENGTH	168mm
CARTRIDGE MASS	260g
PROJECTILE MASS	102g
PROJECTILE FILLING	9g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	975m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Electrical

KNDS

/ 20x102MM

TP / TP-T

/ MISSION

The 20x102mm TP-T and TP round are KNDS target practice rounds designed for 20x102mm automatic weapon systems. The rounds provide armed forces operating the 20M621, and similar automatic weapon systems with a cost-effective training solution.

/ ADVANTAGES

- Qualified on 20M621, mounted on the Narwhal turret, compatible with similar 20x102mm automatic weapon systems
- Similar flight performances as the combat rounds



CARTRIDGE LENGTH	168mm
CARTRIDGE MASS	260g
PROJECTILE MASS	102g
MAX OPERATIONAL RANGE	~2.500m
MUZZLE VELOCITY	975m/s
DISPERSION	H+L ≤ 60cm at 100m
PRIMER	Electrical

KNDS

NAVAL MUNITION

> 127MM

> 100MM

> 76MM

> 40MM

> FUZES

KNDS

/ 127MM

HE / HE-IM

/ MISSION

The 127mm high explosive shell is designed to be fired from the OTO Melara 127mm L54 automatic gun, L54 U.S gun and the 127mm L64 OTO Melara Lightweight gun. The shell is filled with a high explosive payload or insensitive explosive payload to grant the best terminal effect while maximizing user safety. The 127mm HE can be equipped with a PD (point detonating) or proximity fuze to match the customers requirements.

/ ADVANTAGES

- Qualified on OTO Melara 127mm L54 gun
- Solution in service in multiple navies around the world
- Compliant with STANAG 4224 and 4439 (IM)
- Insensitive version available for maximum user safety
- Training round available with a matching ballistic profile and flight performances and others around the world



	HE	HE-IM
SHELL LENGTH	661mm	661mm
SHELL MASS	32kg	32kg
PAYLOAD	3.7kg Compo B	3.8kg IM explosive
MAXIMUM RANGE (in L54)	20.75km	20.75km
MUZZLE VELOCITY (in L54)	808m/s	808m/s

KNDS

/ 127MM

HE-PFFC / HE-PFFC-IM

/ MISSION

The 127mm HE-PFFC shell is designed to be fired from the OTO Melara 127mm L54 automatic gun, L54 U.S gun and the 127mm L64 OTO Melara Lightweight gun. The shell is filled with about 2.270 tungsten cubes that enhance its effectiveness especially for shore bombardment missions or engaging aerial targets. The 127mm HE-PFFC can be equipped with a PD (point detonating), proximity or HOB (height-of-burst) fuze. The use of the HOB fuze allows for detonation a few meters above the target, ensuring a larger radius is covered by the tungsten cubes, ideal for large area clearing.

/ ADVANTAGES

- Qualified on OTO Melara 127mm L54
- Ideal solution for shore bombardment missions and aerial target engaging
- Solution in service in multiple navies around the world
- Fully compliant with STANAG 4224 and 4439 (IM)
- Insensitive version available for maximum user safety
- Training round available with a matching ballistic profile and flight performances



	HE-PFFC	HE-PFFC-IM
SHELL LENGTH	661mm	661mm
SHELL MASS	32kg	32kg
PAYLOAD	3.7kg Compo B + Tungsten cubes	4.2kg IM explosive + Tungsten cubes
MAXIMUM RANGE (in L54)	20.75km	20.75km

/ 127MM

TP

/ MISSION

The 127mm L54 TP (target practice) shell is designed to be fired from the OTO Melara 127mm L54 automatic gun, L54 U.S gun and the 127mm L64 OTO Melara Lightweight gun. The shell is equipped with a dummy fuze and filled with an inert compound to replicate the HE shell ballistic performances for training purposes.

/ ADVANTAGES

- Qualified on OTO Melara 127mm L54 gun
- Solution in service in multiple navies around the world
- Same ballistic profile and flight performances as the 127mm HE shells
- Cost-effective training solution



SHELL LENGTH	661mm
SHELL MASS	32kg
MAXIMUM RANGE (in L54)	20.75km
MUZZLE VELOCITY (in L54)	808m/s
PAYLOAD	3.7kg inert compound
FUZE	Dummy fuze

/ 127MM

FNF

/ MISSION

The 127mm FNF shell is designed to be fired from the OTO Melara 127mm L54 automatic gun, L54 U.S gun and the 127mm L64 OTO Melara Lightweight gun. The shell is used for fuze testing and for crew training and is filled with an inert compound to replicate the HE shell ballistic performances. The FNF round, thanks to a pyrotechnic assembly provides a flash and sound indication in case of fuze functioning, without fragmentation of the shell.

/ ADVANTAGES

- Qualified on OTO Melara 127mm L54 gun
- Solution in service in multiple navies around the world
- Same ballistic profile and flight performances as the 127mm HE shells
- Cost-effective training solution



SHELL LENGTH	661mm
SHELL MASS	32kg
MAXIMUM RANGE (in L54)	20.75km
MUZZLE VELOCITY (in L54)	808m/s
PAYLOAD	3.4kg inert compound + 85g flash charge

/ 127MM

FULL CHARGE

/ MISSION

The 127mm full charge is designed to be used on platforms such as the OTO Melara 127mm L54, U.S L54 and OTO Melara 127mm L64 lightweight gun. The full charge is used to fire all types of 127mm projectiles such as the HE, HE-PFFC, TP and FNF.

/ ADVANTAGES

- Designed for NATO standard 127mm naval artillery systems
- Solution in service in multiple navies around the world
- Full charge used to fire all types of 127mm shells
- Single Base REACH compliant propellant



CHARGE LENGTH	889mm
CHARGE MASS	15.8kg
TYPE	Full charge
CHARGE FILLING	8.2kg Single base propellant
PRIMER	Electric

/ 127MM

REDUCED CHARGE

/ MISSION

The 127mm reduced charge is designed to be used on platforms such as the OTO Melara 127mm L54, U.S L54 and OTO Melara 127mm L64 lightweight gun. The reduced charge is used for training purposes, reducing the firing range and barrel wear.

/ ADVANTAGES

- Designed for NATO standard 127mm naval artillery systems
- Solution in service in multiple navies around the world
- Reduced charge ideal for training purposes
- Single Base REACH compliant propellant



CHARGE LENGTH	889mm
CHARGE MASS	13kg
TYPE	Reduced charge
CHARGE FILLING	2.9kg SB
PRIMER	Electric

/ 127MM

CLEARING CHARGE

/ MISSION

The 127mm clearing charge is designed to be used on platforms such as the OTO Melara 127mm L54, U.S L54 and OTO Melara 127mm L64 lightweight gun. The clearing charge is designed to be used to clear the gun barrel in the event of a projectile getting stuck inside the barrel.

/ ADVANTAGES

- Designed for NATO standard 127mm naval artillery systems
- Solution in service in multiple navies around the world
- Clearing charge used in the event of a shell getting stuck inside of the barrel
- Single Base REACH compliant propellant



CHARGE LENGTH	559mm
CHARGE MASS	9kg
TYPE	Clearing charge
CHARGE FILLING	4.0kg Single Base propellant
PRIMER	Electric

/ 100MM

HE F1 / HE PFF

/ MISSION

The 100mm HE F1 and HE PFF shells are designed to be fired from the Model 53 gun, and equivalent systems. The HE F1 comes filled with a TNT explosive payload. The HE PFF, thanks to its Pre Formed Fragment design, delivers a lethal blast and fragmentation terminal effect upon detonation. The 100mm HE F1 and HE PFF rounds can be equipped with a PD (point detonating) or proximity fuze to match the customers requirements.

/ ADVANTAGES

- Qualified on Model 53 naval gun
- Combat proven solution
- Excellent terminal effect thanks to the prefragmented shell body
- 100mm training round available with a matching ballistic profile and flight performances



	HE F1	HE PFF
SHELL LENGTH	1.085mm	1.085mm
SHELL MASS	23.45kg	23.5kg
PAYLOAD	1.05kg TNT	1.2kg TNT
MAXIMUM RANGE	17.4km	17.4km
MUZZLE VELOCITY	867m/s	867m/s

/ 100MM

TP

/ MISSION

The 100mm TP (target practice) shell is designed to be fired from the Model 53 gun, and equivalent systems. The shell is equipped with a dummy fuze and filled with an inert compound to replicate the 100mm HE F1 and HE PFF shells ballistic performances for training purposes.

/ ADVANTAGES

- Qualified on Model 53 naval gun
- Same ballistic profile and flight performances as the combat rounds



SHELL LENGTH	1.085m
SHELL MASS	23.5kg
PROJECTILE MASS	13.5kg
MUZZLE VELOCITY	867m/s
MAX OPERATIONAL RANGE	17.4km

/ 76MM L62

HE-PD

/ MISSION

The 76mm L62 HE-PD shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell is filled with a high explosive payload and equipped with a PD (point detonating) fuze, allowing for detonation upon target impact.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Several fuzes available: PD or PD with delay selectable
- Combat proven solution, in service in various navies around the world
- Training round available with matching ballistic profile and flight performances
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.56kg Compo A3
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

KNDS

/ 76MM L62

HE-PROX

/ MISSION

The 76mm L62 HE-PROX shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell is filled with a high explosive payload and equipped with a proximity fuze also offering a self-destruction mode. The round is used against patrol boats at short range, large ships and protected on-shore targets at long range.

/ ADVANTAGES

- > Qualified on OTO Melara 76mm weapon system
- > Combat proven solution, in service in various navies around the world
- > Training round available with matching ballistic profile and flight performances
- > Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.56kg Compo A3
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

/ 76MM L62

HE-PF-IM6-OES

/ MISSION

The 76mm L62 HE-PF-IM6-OES shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell incorporates preformed fragments, maximizing the round effectiveness against aerial targets (missiles and aircrafts). The insensitive explosive filling of the HE-PF-IM6-OES shell offers increased user safety through the round complete life cycle. The shell is equipped with the 3AP microwave fuze (a programmable proximity fuze), allowing for proximity function or detonation upon target impact.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Combat proven solution, in service in various navies around the world
- Excellent fragmentation terminal effect
- Training round available with matching ballistic profile and flight performances
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.73kg insensitive explosive and tungsten cubes
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

KNDS

/ 76MM L62

HE-PFF-IM84

/ MISSION

The 76mm L62 HE-PFF-IM84 shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell incorporates preformed fragments, maximizing the round effectiveness against aerial targets (missiles and aircrafts). The shell is filled with Compo B explosive payload as well as high quality tungsten cubes, increasing the round effectiveness against aerial targets and small surface threats. The HE-PFF-IM84 is fitted with the VTPA proximity fuze, offering proximity and point detonating function.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Combat proven solution, in service in various navies around the world
- Excellent fragmentation terminal effect
- Training round available with matching ballistic profile and flight performances
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.76kg Compo B and tungsten cubes
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

/ 76MM L62

HE-SAP

/ MISSION

The 76mm L62 SAP shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The projectile consists of an armor piercing high quality steel shell to ensure the highest armor penetration capability. The shell is filled with an explosive incendiary explosive compound, which is detonated after piercing the target's armor thanks to its base mounted delayed fuze.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Combat proven solution, in service in various navies around the world
- Improved armor penetration against surface vessels
- Base mounted delay fuze allows for detonation after penetrating the target's armor
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.53kg HEXAL or Compo B
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

/ 76MM L62

TP / TP-T

/ MISSION

The 76mm TP and TP-T shells are designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell is filled with an inert compound to replicate the 76mm L62 HE-PD shell ballistic performances for training purposes. The 76mm TP-T projectile is fitted with a tracer that, ignited at round firing, emits a visible signature in daylight.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Same ballistic profile and flight performances as the 76mm HE-PD combat round, offering a cost-effective training solution
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	Inert Compound
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

/ 76MM L62

FNF

/ MISSION

The 76mm L62 FNF shell is designed to be fired from all OTO Melara 76mm weapon systems and equivalents. The shell is used for fuze testing and for crew training and is filled with an inert compound to replicate the HE shell ballistic performances. The FNF round, thanks to a pyrotechnic assembly provides a flash and sound indication in case of fuze functioning, without fragmentation of the shell.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Same ballistic profile and flight performances as the 76mm HE-PD combat round, offering a cost-effective training solution
- Single Base REACH compliant propellant



SHELL LENGTH	907mm
SHELL MASS	12.5kg
PROJECTILE MASS	6.3kg
PROJECTILE FILLING	0.45kg inert compound
MUZZLE VELOCITY	905m/s
MAX OPERATIONAL RANGE	15.9km

/ 76MM L62

CLEARING CHARGE

/ MISSION

The 76mm L62 clearing charge is compatible with all configuration of the OTO Melara 76mm weapon systems. The clearing charge consists of a brass casing, filled with single base propellant charge, designed to clear the gun barrel in the event of a projectile getting stuck inside the barrel.

/ ADVANTAGES

- Qualified on OTO Melara 76mm weapon system
- Designed to clear the gun barrel in the event of a shell getting stuck
- Single Base REACH compliant propellant



SHELL LENGTH	608mm
SHELL MASS	6.35kg
PROPELLANT SB	2.45kg

/ 40MM L70

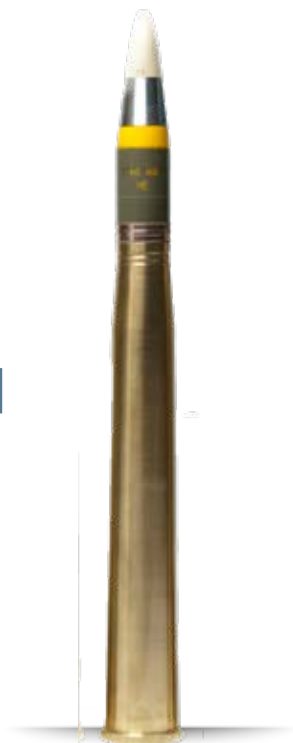
HE-PD

/ MISSION

The 40mm L70 HE-PD shell is designed to be fired from the OTO Melara and Bofors 40mm weapon systems mounted on navy vessels and ground platforms. The shell is filled with a high explosive payload and equipped with a PD (point detonating) fuze, allowing for detonation upon target impact.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Combat proven solution in service in multiple navies and armies around the world
- Training round available with a matching ballistic profile and flight performances
- REACH compliant propelling charge assembly
- ITAR free



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	95g
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

/ 40MM L70

HE-PFF

/ MISSION

The 40mm L70 HE-PFF shell is designed to be fired from the OTO Melara and Bofors 40mm and equivalent weapon systems mounted on navy vessels and ground platforms. The HE-PFF projectile incorporates preformed fragments made of high quality tungsten cubes allowing the shell to deliver a lethal blast and fragmentation terminal effect. The round comes equipped with a proximity fuze, enabling for detonation in close proximity of the target or upon direct impact.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Combat proven solution in service in multiple navies and armies around the world
- Equipped with a proximity fuze
- Excellent fragmentation terminal effect
- Training round available with a matching ballistic profile and flight performances
- Single Base REACH compliant propellant



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	110g Compo B
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

KNDS

/ 40MM L70

HE-T / HEI-T

/ MISSION

The 40mm L70 HEI and HEI-T shells are designed to be fired from the OTO Melara and Bofors 40mm weapon systems mounted on navy vessels and ground platforms. The shells are filled with a high explosive payload and equipped with a PD (point detonating) fuze, allowing for detonation upon target impact. This cartridge is fitted with a tracer that, ignited at round firing, exhibits a visible trace in daylight.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Combat proven solution in service in multiple navies and armies around the world
- Training round available with a matching ballistic profile and flight performances
- Singl Base REACH compliant propellant



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	104g
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

/ 40MM L70

HE-PFF-PROGRAMMABLE

/ MISSION

The 40mm L70 HE-PFF Programmable shell is designed to be fired from the OTO Melara and Bofors 40mm and equivalent weapon systems mounted on navy vessels and ground platforms. The shell is filled with a high explosive payload and equipped with a programmable multifunction fuze. This cartridge has been designed for effective use against aircraft, missiles, UAVs and land/surface targets.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Solution in service in multiple navies and land forces around the world
- Training round available with a matching ballistic profile and flight performances
- The fuze can be set automatically in the gun, by means of an inductive fuze programmer
- Single Base REACH compliant propellant



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	110g Compo B
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

KNDS

/ 40MM L70

AP-T

/ MISSION

Melara and Bofors 40mm and equivalent weapon systems mounted on navy vessels and ground platforms. The AP-T ammunition is a kinetic energy round, designed to penetrate armor plates. The projectile consists of a hardened steel body penetrator fitted with a special anti-ricochet cap and a windshield cap to maintain its aerodynamic profile.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Combat proven solution in service in multiple navies and armies around the world
- Training round available with a matching ballistic profile and flight performances
- Single Base REACH compliant propellant



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	104g
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

/ 40MM L70

TP / TP-T

/ MISSION

The 40mm L70 TP and TP-T shells are designed to be fired from all OTO Melara and Bofors 40mm and equivalent weapon systems mounted on navy vessels and ground platforms. The shells are filled with an inert compound to replicate the 40mm L70 HE-PD shell ballistic performances for training purposes. The 40mm TP-T is fitted with a tracer that, ignited at round firing, exhibits a visible trace in daylight.

/ ADVANTAGES

- Qualified on OTO Melara 40/70 weapon system
- Solutions in service in multiple navies and armies around the world
- Matches the ballistic profile and flight performances of the 40mm L70 HE-T and HEI-T rounds.
- Single Base REACH compliant propellant



SHELL LENGTH	535mm
SHELL MASS	2.5kg
PROJECTILE MASS	0.96kg
PROJECTILE FILLING	Inert
MUZZLE VELOCITY	1.005m/s
MAX OPERATIONAL RANGE	11.8km

/ FB340

PD MECHANICAL FUZE

/ MISSION

The FB340 is a mechanical fuze designed to be used on 127mm ammunition with a Point detonating and Point detonating delay function. The fuze is completely waterproof and functions regardless of the angle of impact (graze functioning)

/ ADVANTAGES

- STANAG 4187 compliant
- Designed for 127mm L54 ammunition
- Combat proven solution
- Operating mode: Point detonating



FUZE TYPE	Mechanical
FUZE MASS	2.12kg
FUZE LENGTH	119mm (248mm overall)
MIN. OPERATING RANGE (in L54)	350m
POWER SUPPLY	Firing force
FUNCTIONS	PD SQ / PD SQ graze
SAFETY DISTANCE (in L54)	100m

/ VTPA FBO127

PROXIMITY FUZE

/ MISSION

The VTPA-FBO127 is a proximity fuze designed to be used on 127mm HE and PFF shells, to defeat targets such as aircrafts, missiles and small surface threats. The fuze is a self-powered radio transmitting and receiving unit, operating on the basis of the Doppler effect. The operating modes are: Proximity + Point detonating + self destruction: the shell detonates in close proximity of its target or upon direct impact. If neither occurs, self destruction is activated.

/ ADVANTAGES

- > STANAG 4187 compliant
- > Combat proven solution
- > Designed for 127mm L54 ammunition
- > Three operating modes: Proximity, Point detonating and Self-destruction



FUZE TYPE	Electronic
FUZE MASS	2.12kg
FUNCTIONS	Proximity / PD / self destruction
MIN. OPERATING RANGE (in L54)	300m
POWER SUPPLY	Lithium battery
FUZE LENGTH	120mm (248mm overall)
SAFETY DISTANCE	100m (mechanical) 300-600m (electrical)

/ VTPA-FB76

PROXIMITY ELECTRONIC FUZE

/ MISSION

The VTPA-FB76 is a proximity fuze designed to be used on 76mm L62 HE and PFF shells, to defeat targets such as aircrafts, missiles and small surface threats. The fuze is a self-powered radio transmitting and receiving unit, operating on the basis of the Doppler effect. Two operating modes are electrically selectable at the time of firing:

-Proximity + Point detonating + self destruction: the shell detonates in close proximity of its target or upon direct impact. If neither occurs, self destruction is activated.

-Point detonating: detonation upon direct impact.

/ ADVANTAGES

- STANAG 4187 compliant
- Designed for 76mm L62 ammunition
- Combat proven solution
- Three operating modes: Proximity, Point detonating and Self-destruction



FUZE TYPE	Electronic
FUZE MASS	930g
FUZE LENGTH	95mm (203mm overall)
MIN. OPERATING RANGE	300m
POWER SUPPLY	Lithium battery
FUNCTIONS	Proximity, PD, Self-destruct
MECHANICAL SAFETY DISTANCE	50m
PROXIMITY SAFETY DISTANCE	500m

/ 3AP MOD 2

PROGRAMMABLE MICROWAVE FUZE

/ MISSION

The 3AP MoD 2 fuze was designed to increase the capability of target interception to defeat aircrafts, missiles and small boats by an advanced RF sensor and by different settable proximity modes. The delayed impact mode allows the fuze to penetrate a boat or bunker before detonating the projectile. Designed for 76mm L62 ammunition, the fuze is programmable through a gun-mounted electronic setter and can be set automatically or manually. The fuze offers five functioning modes: Proximity, Point detonating, PD Delay, Delay and Self-destruction.

/ ADVANTAGES

- STANAG 4187 compliant
- Designed for 76mm L62 ammunition
- Combat proven solution
- Five operating modes: Proximity, Point detonating, PD Delay, Delay, Self destruction



FUZE TYPE	Electronic
FUZE MASS	930g
FUZE LENGTH	95mm (203mm overall)
MIN. OPERATING RANGE	300m
POWER SUPPLY	Lithium battery
FUNCTIONS	Proximity / PD / PD Delay / Delay / SD
MECHANICAL SAFETY DISTANCE	100m
PROXIMITY SAFETY DISTANCE	500m

/ FB40

PROXIMITY FUZE

/ MISSION

The FB40 is a proximity fuze designed to be used on 40mm L70 HE and PFF shells, to defeat targets such as aircrafts, missiles and small surface threats. The fuze is a self-powered radio transmitting and receiving unit, operating on the basis of the Doppler effect. Two operating modes are electrically selectable at the time of firing:

-Proximity + Point detonating + self destruction: the shell detonates in close proximity of its target or upon direct impact. If neither occurs, self destruction is activated.

-Point detonating: detonation upon direct impact.

/ ADVANTAGES

- STANAG 4187 compliant
- Designed for 40mm L70 ammunition
- Combat proven solution
- Double operating mode: Proximity and Point detonating



FUZE TYPE	Electronic
FUZE MASS	128g
FUZE LENGTH	83.2mm (98.1mm overall)
MIN. OPERATING RANGE	400m
POWER SUPPLY	Lead battery
FUNCTIONS	Proximity
MECHANICAL SAFETY DISTANCE	50m
PROXIMITY SAFETY DISTANCE	500m

/ FB769

MULTIMODE PROGRAMMABLE FUZE

/ MISSION

The FB769 is a programmable multimode fuze for 40mm L70 HE PFF ammunition. It is designed to defeat aircrafts, missiles and land / surface targets. The fuze is set wirelessly just before firing, ensuring the best performances with regards to the encountered operational scenarios. FB769 offers five operating modes: Proximity, Gated proximity, Gated proximity and Airburst, Airburst and Point detonating.

/ ADVANTAGES

- > STANAG 4187 compliant
- > Combat proven solution
- > Five operating modes offering great versatility: Proximity, Gated proximity, Gated proximity + Airburst, Airburst, Point detonating



FUZE TYPE	Electronic
FUZE MASS	128g
FUZE LENGTH	83mm (98mm overall)
MIN. OPERATING RANGE	300m
SELF-DESTRUCTION TIME	9s
POWER SUPPLY	Lead battery
FUNCTIONS	Proximity, Gated proximity, Airburst, Point detonating
MECHANICAL SAFETY DISTANCE	50m
PROXIMITY SAFETY DISTANCE	500m
ACTIVATION DIST. FROM TARGET	<3m

/ FB 478

PD ELECTRONIC FUZE

/ MISSION

The FB 478 is an electric fuze designed to be used on 40mm L70 ammunition with a super-quick Point detonating and self-destruction operating modes. The fuze is completely waterproof and functions regardless of the angle of impact.

/ ADVANTAGES

- > STANAG 4187 compliant
- > Combat proven solution



FUZE TYPE	Electronic
FUZE MASS	51g
FUZE LENGTH	42mm (75mm overall)
MIN. OPERATING RANGE	300m
POWER SUPPLY	Setback generator
FUNCTIONS	Point detonating
MECHANICAL SAFETY DISTANCE	50m

LOITERING MUNITION

> SHORT-RANGE

> MEDIUM-RANGE

> WARHEADS



KNDs

/ MX-10 DAMOCLES

FRAG 550G



/ MISSION

The MX-10 DAMOCLES is a short range loitering munition designed to defeat infantry squads and unprotected vehicles. This LM, used by the French Armed Forces, is a collaboration between K. NDS & Delair. Equipped with a 550g HE Frag warhead, MX-10 DAMOCLES provides the adequate effect on modern threats with no compromise on safety for users.

/ ADVANTAGES

- > GNSS Denied capability
- > Jam-resilient data link
- > Automatic tracking
- > Day & night capability
- > Point detonating warhead

RANGE	10km
ENDURANCE	45min
LAUNCH	VTOL
WEIGHT	3,5kg

/ MT-10

FRAG 550G



/ MISSION

The MT-10 is a short range loitering munition designed to defeat infantry squads and unprotected vehicles. MT-10 is tube-launched for an easy integration on every platform. Equipped with 550g HE Frag warhead, MT-10 provides the adequate effect on modern threats with no compromise on safety for users

/ ADVANTAGES

- Very low acoustic signature.
- Jam-resilient data link.
- Integrable on every platform (armoured vehicles, UGV, etc...)
- Fitted for urban combat

RANGE	10km
ENDURANCE	30min
LAUNCH	TUBE-LAUNCH
WEIGHT	4kg

/ MV-25 OSKAR

FRAG 550G



/ MISSION

MV-25 OSKAR is a short range loitering munition designed to defeat infantry squads and unprotected vehicles. This LM is a collaboration between KNDS & Delair. Equipped with 550g HE Frag warhead, MV-25 OSKAR provides the adequate effect on modern threats with no compromise on safety for users

/ ADVANTAGES

- Battle-proven
- Jam-resilient data link
- Day & night capability

RANGE	25km
ENDURANCE	45min
LAUNCH	Manual
WEIGHT	2,3kg

Loitering

KNDS

/ MV-100 VELOCE

FRAG 4KG



/ MISSION

MV-100 VELOCE is a medium-range loitering munition with high velocity capability designed to defeat protected vehicles and infrastructures. This LM is a collaboration between KNDS & EOS Technologies. Equipped with 4kg HE Frag warhead, MV-100 VELOCE provides the adequate effect on modern threats with no compromise on safety for users

/ ADVANTAGES

- High velocity to avoid interception (up to 400km/h)
- GNSS Denied capability

RANGE	100km
ENDURANCE	30min
LAUNCH	Catapult
WEIGHT	25kg

/ MATARIS GROUND

FRAG 550G



/ MISSION

MATARIS Ground is a short-range ground remotely controlled munition. Compatible with C4 explosive payloads, dedicated HE FRAG warhead or other payloads, MATARIS Ground increases the protection of operators giving the capability to remotely neutralize a threat. Fitted for modern warfare, MATARIS Ground provides the adequate effect on modern threats with no compromise on safety for users

/ ADVANTAGES

- Protection of the operators
- Fitted for modern conflicts
- Man in the loop
- Modular payloads & data link

/ FRAG 550G

MATARIS WARHEAD



/ MISSION

The FRAG 550g explosive fragmentation warhead is designed for use on UAV platforms to defeat soft targets and light armored vehicles. The warhead contains high density pellets offering an excellent terminal effect over a large radius. Thanks to its explosive and fragmentation terminal effect, the warhead can also be used on interceptor drones to defeat light aerial threats.

/ ADVANTAGES

- Equipped with a 5 step safety feature granting maximum user safety and reducing the risk of collateral damage
- Safety mechanism easily controllable through our AIMC2 ground station or other C2
- Easily integrable on any loitering munition

/ EFP 2.5KG

MATARIS WARHEAD



/ MISSION

The EFP 2.5kg EFP warhead is designed for use on loitering ammunition to defeat armored targets. The warhead is fitted with a high density liner which turns into a high velocity explosively formed penetrator upon detonation. This warhead enables users to defeat heavily armored targets through a top attack maneuver by defeating the target's roof armor, without being affected by cope cages or spaced armor.

/ ADVANTAGES

- Equipped with a 5 step safety feature granting maximum user safety and reducing the risk of collateral damage
- Safety mechanism easily controllable through our AIMC2 ground station or other C2
- Easily integrable on any loitering munition
- The explosively formed penetrator is not affected by cope cages and spaced armor

/ WARHEADS

FOR LOITERING MUNITION



/ MISSION

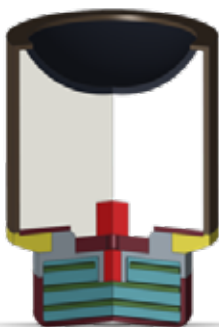
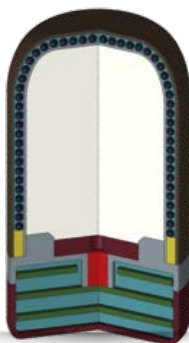
The KNDS warhead family for loitering munition offers manufacturers and armed forces with easily integrable, highly effective and safe solutions, to defeat a wide spectrum of targets, from deployed infantry to heavy armored targets. Thanks to an innovative industrial process, our warheads come in different weight classes to fit the technical limitations of the platforms as well as fulfill the operational needs of its user. In addition to their excellent terminal effect, our warheads can be equipped with an electronic slapper SAD, granting a 5 step safety system, offering maximum safety and allowing for a safe return of the loitering munition, or, can be equipped with a conventional 1A/1W ignition device for an easier platform integration. Thanks to our long history of ammunition manufacturing, we are able to offer custom made solutions (effect class, weight class and level of safety) for specific needs.

/ ADVANTAGES

- ITAR free solutions
- Easily integrable on any loitering munition and interceptor drones
- All warheads can be equipped with the same 5 step safety feature offering maximum user safety, reducing collateral damage risks and allowing for safe return of the loitering munition in the event no target is found or not engaged

/ FRAGMENTATION

Filled with preformed fragments, increasing the lethality radius against soft targets and aerial threats such as UAVs. Fragment number and mass can be adjusted to customer requirements (space, mass, efficiency...).

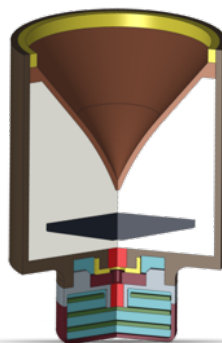


/ EXPLOSIVELY FORMED PENETRATOR

Inspired by the BONUS technology, detonation occurs more than 30m away from the target, the explosively formed penetrator reaches a velocity of over 2 000m/s allowing for the defeat of heavy armored targets through a top-attack even when protected by cope cages or APS.

/ SHAPED CHARGE

Upon impact with its target, the copper liner is turned into a high velocity jet, able to penetrate and defeat heavy armored targets such as MBTs.



/ AIMC2

CONTROL & COMMAND STATION



/ MISSION

AIMC2 is a command & control software dedicated to loitering munition systems. Developed in cooperation with IMPACT, this C2 is compatible with many battle management system (ATAK, DeltaSutie...). Allowing to manage the safety mechanisms of our MATARIS warheads and user-friendly, AIMC2 easily turns every soldier into a loitering munition operator.

/ ADVANTAGES

- > Compatible with BMS
- > User-friendly MMI
- > Managing safeties of KNDS warheads

KNDS

OTHER PRODUCTS

> GALIX

> 40MM GRENADES

KNDS



The GALIX system treats all known threats and therefore offers optimum defensive action to the survivability of armored vehicles. The GALIX system is modular and the nature of the ammunition, the number of launcher tubes and their positioning can therefore be determined as a function of the vehicle geometry and mission.

/ 40X46MM LV

HE-FRAG-SD IM

/ MISSION

The 40x46mm LV HE-FRAG-SD IM is an impact grenade, designed to be highly insensitive and lethal in the target area up to 10m from the impact point. The grenade delivers a simultaneous blast and fragmentation terminal effect. The grenade can be fired from any low velocity (LV) grenade launcher.

/ ADVANTAGES

- Insensitive high explosive filling
- Dual safety impact fuze with a self-destruct operating mode



ROUND LENGTH	123mm
ROUND MASS	280g
PROJECTILE MASS	210g
MUZZLE VELOCITY	78m/s
PROJECTILE FILLING	44g PBX based
OPERATIONAL RANGE	430m

/ 40X46MM LV

HEDP-SD IM

/ MISSION

The 40x46mm LV HEDP-SD IM is an impact grenade, designed to penetrate over 80mm of steel and to be lethal in the target area up to 10m from the impact point. The grenade delivers a simultaneous blast and fragmentation terminal effect. The grenade can be fired from any low velocity (LV) grenade launcher.

/ ADVANTAGES

- Insensitive high explosive filling
- Dual safety impact fuze with a self-destruct operating mode



ROUND LENGTH	123mm
ROUND MASS	280g
PROJECTILE MASS	210g
MUZZLE VELOCITY	78m/s
PROJECTILE FILLING	32g PBX based
OPERATIONAL RANGE	430m

/ 40X46MM LV

TPM

/ MISSION

The 40x46mm LV TPM is a Target Practice Marker grenade that produces a visible signature upon impact. It offers the same ballistic profile and performances as the HE versions. The grenade can be fired from any low velocity (LV) grenade launcher.

/ ADVANTAGES

- Visual signature upon impact for training purposes
- Designed for low velocity grenade launchers



ROUND LENGTH	123mm
ROUND MASS	280g
PROJECTILE MASS	210g
MUZZLE VELOCITY	78m/s
PROJECTILE FILLING	Orange dye
OPERATIONAL RANGE	430m

/ 40X46MM LV

TP

/ MISSION

The 40x46mm LV TPM is a Target Practice grenade offering the same ballistic profile and performances as the HE versions. The grenade can be fired from any low velocity (LV) grenade launcher.

/ ADVANTAGES

- Identical ballistic profile and performances as the HE combat versions
- Designed for low velocity grenade launchers



ROUND LENGTH	123mm
ROUND MASS	280g
PROJECTILE MASS	210g
MUZZLE VELOCITY	78m/s
PROJECTILE FILLING	Inert
OPERATIONAL RANGE	430m



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