



AMMUNITION

CATALOGUE

WHO WE ARE

Balu had a humble beginning in the year 1989, in Belgaum, India. It has been a long journey & over three generations of the Balu Family have worked to build a truly global enterprise. But we have only just started & endeavor to become one of the largest Precision Engineering & Metal Forming Company in the world.

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Precision Engineering & Manufacturing Company
- 

Manufacturing excellence using the best Industry 4.0 practices to achieve scale & efficiency in manufacturing
- 

Forging (Metal Forming) & Precision Machining under one roof
- 

Manufacturing components conforming to New Emission Regulations & New Energy Vehicles
- 

Three Decades of Manufacturing Excellence
- 

Spectrum of Industries Served from Agriculture, Electric Vehicles, Defence, etc.
- 

Gainful Employment to more than 1000 personnel
- 

Export & Distribution Network in over 80 Countries & successfully supplying to over 25 OEMs globally

INDUSTRIES SERVED & APPLICATION



OVERVIEW GREENFIELD FACILITY



Advanced Forging

Advanced forging facility featuring **25 Ton, 16 Ton, and 10 Ton Hydraulic Hammers** and an **8000 Ton Mechanical Press** with Hydraulic Power Head. The system enhances the capacity of the hammers, resulting in significant energy savings. Equipped with **GERB Anti-Vibration Technology**, it increases accuracy, extends the life of presses and hammers, and ensures higher uptime with no breakdowns. Vibration levels are reduced by **up to 90%**, optimizing overall performance and efficiency.



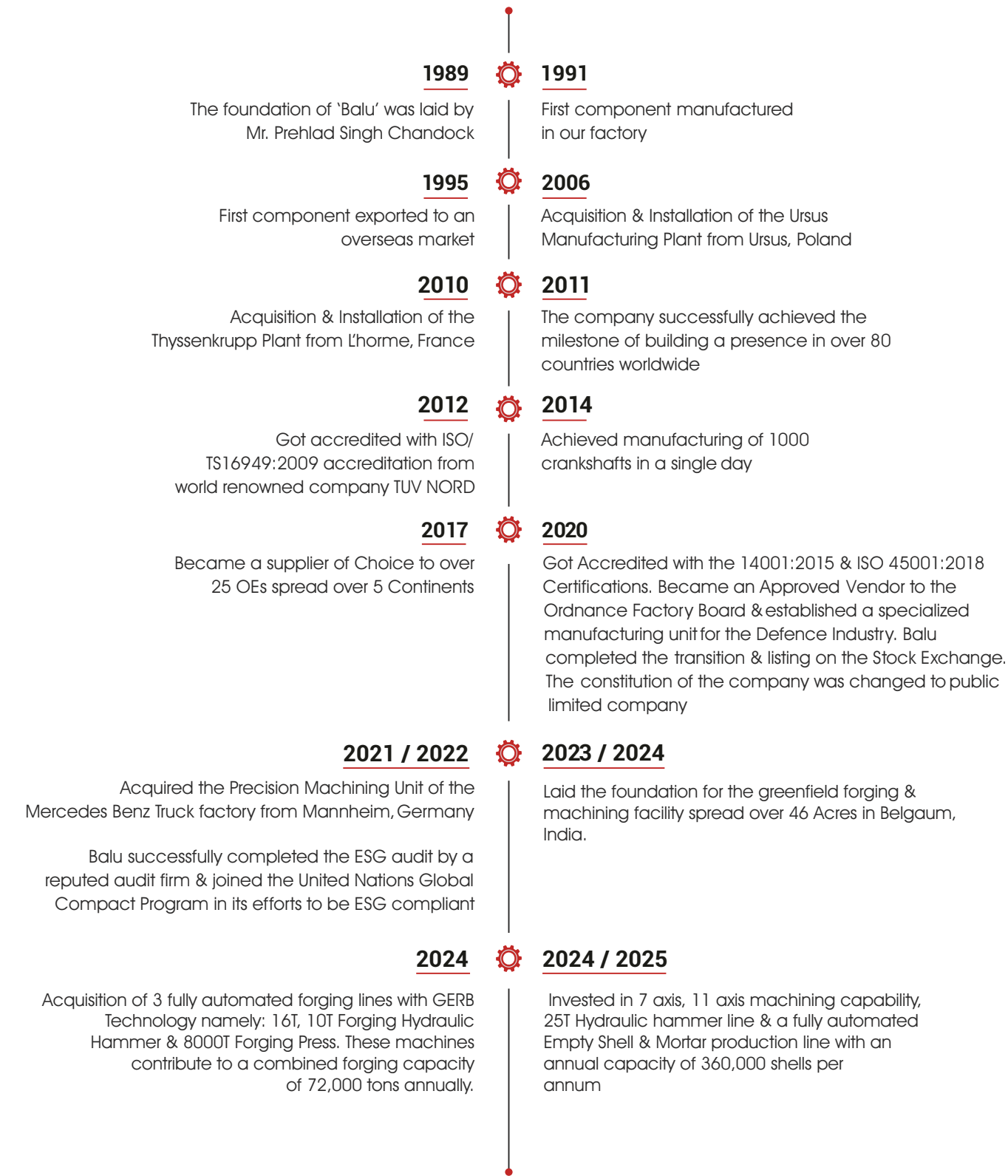
FULLY
INTEGRATED
FORGING
& PRECISION
MACHINING

Precision Machining

The machining facility operates with a capacity of **80,000 MTPA**, advanced state-of-the-art **7-Axis and 11-Axis CNC** machining line supported by **Junker high precision grinding machines**. The machining process integrates advanced automation and robotics, including **FANUC robotic systems** in the empty shell production line.

HISTORY

HOW WE STARTED BALU



CORE

COMPETENCY

The Core Competencies which distinguish us from our competitors & the pillars which have ensured the building of a strong brand worldwide are as below:

- **Complete CNC manufacturing capability**
- **Over three decades of experience in Precision Engineering**
- **Diversified Product Portfolio & Applications**
- **Supplier of choice for OEMs**
- **State of the Art Manufacturing set up**
- **In-house tool room**
- **In-house Metallurgical lab**
- **Dedicated R&D Facility**
- **Strong Emphasis on New Energy Vehicles & Components**
- **All machining & forging operations in-house**
- **Well established brand worldwide**

FULLY AUTOMATED EMPTY SHELL PRODUCTION LINE

UPTO 360,000 SHELLS CAPACITY PER ANNUM

- 1000T Hydraulic Press
- 400T Vertical Elongator
- 600MT Hydraulic Nosing Press
- Induction Heater 1800 KW
- Induction Heater 600 KW (Partial Heating)
- Copper Band Dia Press for Assembly
- Powder Coating Paint shop with Automation
- 6-Axis multiple Robot
- Phosphating Plat of 155mm Full Automated
- Machine Auxiliary Supporting
- Shot Blasting
- Sand Blasting
- CNC Machining
- Heat Treatment
- Cutting (Circular Saw) m/c
- 8000T Forging Press: Capacity to Forge 25Kg to 120Kg
(Powered by FANUC Robotic Automation along with GERB Anti Vibration)
- 10T Forging Hydraulic Hammer: Capacity to Forge 50 Kg to 200 Kg
(Complete Automation with GERB Anti Vibration)
- 16T Forging Hydraulic Hammer: Capacity 100 Kg to 1000 Kg
(Complete Automation with GERB Anti Vibration)
- Ultra modern machining unit upgraded with latest Technology & Automation
- Ultra modern metallurgy lab NABL accredited
- In-House Tooling & Die Making Facilities
- In-House Design and R&D Facility with latest software
- Metal flow simulation facility with NX-FORGE11 software
- AutoCAD, (UG/NX) Unigraphics, VaracAD, SolidWorks, DelCam

AMMUNITION SUMMARY

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AERIAL
AMMUNITION

Balu Forge has supplies of shells covering all variants,
including HE, Smoke, Illuminating and Incendiary.

MORTAR AMMUNITION



51 mm HE, MORTAR SHELL

51 mm High-Explosive (HE) mortar shell is a lightweight munition designed for infantry support, providing effective firepower against enemy personnel, light fortifications, and unarmored vehicles. Its compact size makes it ideal for rapid deployment in close-range combat scenarios.

- Mass of the Filled Bomb : 850 g
- Filling type (Standard) : TNT
- Shelf Life : 10 years
- Maximum dia : 50.7 ± 0.1 mm
- Length of Bomb : 282.96 mm
- Filling Mass : 215 ± 5 g
- Range : 1000 m



51 mm SMOKE, MORTAR SHELL

51 mm smoke mortar shell is designed for creating a smoke screen in tactical operations. It obscures visibility to provide cover for troop movements, mark targets, or signal positions during combat scenarios.

- Mass of the Filled Bomb : 960 ± 25 g
- Filling type (Standard) : Hexachloroethene based composition
- Filling Mass : 500 g (Approx.)
- Maximum dia : 50.85 mm
- Length of Bomb : 282 ± 1 mm
- Shelf Life : 10 years
- Range : 830 m



51 mm ILLG, MORTAR SHELL

Bomb 51 mm Illuminating belongs to the family of Illuminating ammunition extensively used to support night warfare. The bomb provides enough illumination to support infantry for combats, aerial photography and army movements. Bomb is fired from 51 mm mortar, smooth bore, muzzle loading weapon.

- Mass of the Filled Bomb : 930 ± 25 g
- Range : 300 to 900 m
- Maximum dia : 50.7 ± 0.1 mm
- Shelf Life : 10 years
- Length of Bomb : 283 ± 2 mm



81 mm HE, MORTAR SHELL

81 mm High-Explosive (HE) mortar shell is designed for indirect fire support in combat, delivering explosive fragmentation over a wide area to neutralize enemy personnel, equipment and light fortifications. It is commonly used for suppressing enemy positions, providing area denial, and creating tactical advantages in the battlefield.

- Mass of the Filled Bomb : 4.4 kg ± 0.125 kg
- Filling type (Standard) : TNT Grade 1E
- Filling mass : 705 ± 5 g
- Maximum dia : 80.8 mm
- Length of Bomb : 379 mm (Max.)
- Shelf Life : 10 years
- Range : 5000 m



81 mm SMOKE, MORTAR SHELL

81 mm Smoke Mortar Shell is engineered to deliver rapid and reliable smoke screening for battlefield and training applications. Designed for consistent performance, it produces dense smoke to support troop movement, concealment, and signaling operations.

- Mass of the Filled Bomb : 4.31 kg to 4.51 kg
- Filling type (Standard) : Plasticized White Phosphorus
- Filling mass : 215 ± 5 g
- Maximum dia : 80.80 mm
- Length of Bomb : 379 mm (Approx.)
- Shelf Life : 10 years
- Range : 5000 m

The current production capacity only supports empty shell product which will be offered as ‘ready to fill’ condition with an annual capacity of 300,000 shells. The portfolio will be expanded as per the customer requirement in a phased manner. The company is working on an expansion plan to add TNT, HMX & RDX production, pouring & filling capacities to eventually offer solutions in ‘ready to use’ condition.

MORTAR AMMUNITION



81 mm ILLG, MORTAR SHELL

81 mm ILLG (Illuminating) mortar shell is designed to provide illumination for military operations during night-time or low-visibility conditions. It is used to light up specific areas for tactical advantage, allowing soldiers to identify targets and movements in dark environments.

- Mass of the Filled Bomb : 3.85 g
- Range : 4800 m
- Maximum dia : 80.6 – 0.1 mm
- Length of Bomb : 552 mm
- Filling Mass : 743 g (Approx.)
- Shelf Life : 10 years



120 mm HE, MORTAR SHELL

Mainly used for firing at troops in open areas and enemy assembly areas which cannot be engaged by flat trajectory weapons, very effective for counter mortar task and enemy position on reverse sloped mountains.

- Mass of the Filled Bomb : 13.4 kg
- Filling type (Standard) : TNT 1E
- Shelf Life : 10 years
- Maximum dia : 119.6 mm
- Length of Bomb : 282 ± 1 mm
- Filling Mass : 2.488 kg ± 0.08 kg
- Range : 6500 m



120 mm SMOKE, MORTAR SHELL

Basically, a smoke type screening Ammunition. Achieves a dense smoke screen for facilitating tactical deployment of troops and evading from enemy firing.

- Mass of the Filled Bomb : 13.5 kg
- Filling type (Standard) : Plasticized White Phosphorus
- Shelf Life : 10 years
- Maximum dia : 119.6 mm
- Length of Bomb : 674.64 mm
- Filling Mass : 1.700 ± 0.025 kg
- Range : 6500 m



120 mm ILLG, MORTAR SHELL

120 mm ILLG (Improved Local Launching Gun) mortar shell is designed for enhanced long-range precision and effectiveness in delivering high-impact firepower. It is typically used in military operations for targeting enemy positions with greater accuracy, providing both offensive and defensive capabilities on the battlefield.

- Mass of the Filled Bomb : 13.05 kg ± 0.20 kg
- Range : 6000 m
- Maximum dia : 119.6 mm
- Shelf Life : 10 years
- Length of Bomb : 677 mm (Max.)

The current production capacity only supports empty shell product which will be offered as ‘ready to fill’ condition with an annual capacity of 300,000 shells. The portfolio will be expanded as per the customer requirement in a phased manner. The company is working on an expansion plan to add TNT, HMX & RDX production, pouring & filling capacities to eventually offer solutions in ‘ready to use’ condition.

ARTILLERY AMMUNITION



155 mm HE ERFB BT, ARTILLERY SHELL

155 mm HE ERFB BT (High-Explosive Extended Range Full-Bore Base-Tail) artillery shell is designed for long-range precision strikes, combining high explosive power with enhanced aerodynamic performance. It is primarily used to deliver destructive effects against enemy fortifications, vehicles, and personnel at extended ranges in modern artillery warfare.

- Maximum Range : 30 km
- Muzzle Velocity : 897 ± 5 m/s
- Mass of Shell without Fuze : 42.84 to 45.34 kg
- Length of Shell without Fuze: 842.3 mm
- Max Chamber Pressure : 282.96 MPa
- Shelf Life : 10 years



155 mm HE ERFB BB, ARTILLERY SHELL

155 mm HE ERFB BB (High-Explosive Extended Range Full-Bore Base Bleed) artillery shell is designed for long-range precision targeting with enhanced explosive impact. Its base-bleed technology reduces drag, significantly increasing its range, making it ideal for neutralizing enemy positions, fortifications, and vehicles.

- Maximum Range : 38.4 km
- Muzzle Velocity : 897 ± 5 m/s
- Mass of Shell without Fuze : 45.27 to 47.77 kg
- Length of Shell without Fuze: 861 mm
- Max Chamber Pressure : 444 MPa
- Shelf Life : 10 years



155 mm HE M107, ARTILLERY SHELL

Often used for training/practice, ammunition.

- Maximum Range : 18 km
- Muzzle Velocity : 685 m/s
- Mass of Shell without Fuze : 42.1 kg
- Length of Shell without Fuze: 604 mm
- Max Chamber Pressure : 386 MPa
- Shelf Life : 10 years



155 mm HE M77 B, ARTILLERY SHELL

Rapid and accurate firing at long ranges to attack the ground targets by 155 mm Artillery Gun.

- Maximum Range : 24 km
- Muzzle Velocity : 685 m/s
- Mass of Shell without Fuze : 41.7 kg
- Length of Shell without Fuze: 728 mm
- Max Chamber Pressure : 440 MPa
- Shelf Life : 10 years



155 mm ILLUMINATING ERFB, ARTILLERY SHELL

Designed to support night warfare. The illumination provides by this ammunition is sufficient for identification and engagement of all types of moving and non-moving objects

- Maximum Range : 24 km
- Dia : 154.5 mm
- Mass of Shell without Fuze : 42.84 to 45.34 kg
- Length of Shell without Fuze: 843 mm
- Max Chamber Pressure : 390 MPa
- Shelf Life : 10 years

The current production capacity only supports empty shell product which will be offered as ‘ready to fill’ condition with an annual capacity of 300,000 shells. The portfolio will be expanded as per the customer requirement in a phased manner. The company is working on an expansion plan to add TNT, HMX & RDX production, pouring & filling capacities to eventually offer solutions in ‘ready to use’ condition.

ARTILLERY AMMUNITION



155 mm SCREENING SMOKE ERFB, ARTILLERY SHELL

The shells are normally used to mask the movement or redeployment of own forces from enemy observation, thereby neutralizing direct enemy fire

- Maximum Range : 24 km
- Muzzle Velocity : 345 m/s
- Mass of Shell without Fuze : 42.84 to 45.34 kg
- Length of Shell without Fuze: 843 mm
- Max Chamber Pressure : 440 MPa
- Shelf Life : 10 years



130 mm HE, ARTILLERY SHELL

130 mm High Explosive (HE) Artillery Shell is engineered for powerful, reliable performance in long-range artillery systems. Precision-forged and machined, it ensures high structural integrity, ballistic stability, and consistent performance, meeting stringent military safety and quality standards.

- Maximum Range FVC/RVC : 27 km/19 km
- Muzzle Velocity FVC/RVC : FVC 810 to 930 m/s, RVC 525 to 705 m/s
- Mass of Shell without Fuze : 32.05 ± 0.55 kg
- Length of Shell without Fuze: 565.30 mm to 568.70 mm
- Max Chamber Pressure : 425 MPa
- Shelf Life : 20 years



105 mm HEER (BB), ARTILLERY SHELL

It is a high explosive extended range (HEER) Shell. Better fragmentation is achieved by introducing high quality steel alloy and thinning the body of the shell. The optimised ballistic shape of the shell improve the ballistic coefficient (Reduced drag) & provide better accuracy. The Base Bleed Unit (BBU) at base reduces the drag and gives additional thrust to carry the shell further.

- Maximum Range : 20.4 km
- Muzzle Velocity : 731 m/s
- Mass of Shell Filled Shell : 15.765 kg
- Length of Shell : 611 mm
- Max Chamber Pressure : 332 MPa
- Shelf Life : 30 years



105 mm HE, ARTILLERY SHELL

105 mm high-explosive (HE) artillery shell is designed for use in indirect fire support, delivering powerful explosive effects against enemy personnel, light vehicles, and fortifications. Its primary purpose is to provide area suppression, destruction of soft targets, and disruption of enemy operations over a wide radius.

- Maximum Range : 17.6 km
- Muzzle Velocity : 591 to 710 m/s
- Mass of Filled Shell : 16.97 kg
- Length of Shell without Fuze : 451.56 ± 2.5 mm
- Max Chamber Pressure : 332 ± 8 MPa
- Shelf Life : 30 years



105 mm ILLG, ARTILLERY SHELL

This ammunition provides intense illumination for identification and engagement of all types of stationary and moving objects

- Mass of Filled Shell : 15. to 20 kg
- Maximum dia : 108-0.3 mm
- Length of Shell : 450 mm
- Maximum Range : 17 km
- Shelf Life : 10 years

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NAVAL AMMUNITION



CARTRIDGE OF 40 mm L/60 NAVAL

It is anti aircraft ammunition on Bofors or similar automatic guns

- Maximum Range : 9830 m
- Muzzle Velocity : 869 ± 10 m/s
- Mass of Ammunition : 2.1 kg
- Length of Ammunition : 447 mm
- Mass of Projectile : 0.9 kg
- Shelf Life : 10 years



CARTRIDGE 76.2 mm NAVAL HE AND PRACTICE

This Ammunition id designed to fight against enemy Aircraft / ships from Warship. It is made into version. Cartg. 76.2 mm GE Fuzed withvariable time fuze for combat purpose and Cartg. 76.2 mm Practice use for practice purpose

- Maximum Range : 6900 m
- Muzzle Velocity : 994.5 m/s
- Mass of Ammunition : 15.30 kg
- Length of Shell without Fuze : 815.5 mm
- Weight of Projectile : 5.9 kg
- Shelf Life : 10 years



CARTRIDGE 76.2 mm NAVAL HEPF

76.2 mm Naval HEPF (High-Explosive Pre-Fragmented) cartridge is designed for naval gun systems to engage air, surface, and light land targets. Its pre-fragmented warhead ensures effective destruction of fast-moving or lightly armored threats, making it versatile in multi-role combat scenarios.

- Maximum Range : 15.5 Km
- Muzzle Velocity : 983 ± 10 m/s
- Mass of Ammunition : 13.10 to 13.40 kg
- Length of Shell without Fuze : 815.5 mm
- Weight of Projectile : 5.9 kg
- Shelf Life : 10 years



CARTRIDGE 76/62 SRGM

76/62 SRGM (Super Rapid Gun Mount) cartridge is a high-performance naval artillery round designed for medium-caliber naval guns. It is primarily used for surface engagement, air defense, and shore bombardment, offering rapid-fire capability and precision targeting for modern naval operations.

- Maximum Range : 16000 m
- Muzzle Velocity : 905+/- 5 m/s
- Mass of Ammunition : 12.5 kg
- Length of Ammunition : 907 mm
- Max Pressure : 305 MPa
- Shelf Life : 10 years



RGB 60 ROCKET

RGB-60 (Rocket Guided Bomb model 60) is an anti-submarine weapon with a range of 5,700 to 6,000 meters and an operational depth of up to 500 meters. It is typically deployed from ships using the RBU-6000 launcher, capable of firing salvos of up to 12 rockets.

- Maximum Range : 350 m to 5500 m
- Dia : 0.212 mm
- Length of Ammunition : 1830 mm
- Fuze : YBD 60

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TANK AMMUNITION



ROUND 120 mm FSAPDS MK-II MBT

The Fin Stabilized Armour Piercing Discarding Sabot (FSAPDS) capable of defeating target upto 2000 mtrs.

- Maximum Range : 1600 to 1700 km
- Muzzle Velocity : 1650 m/s
- Mass of Filled Shell : 20.840 kg
- Length of Round : 998 mm
- Weight of Projectile : 7.30 Kg
- Shelf Life : 10 years



ROUND 120 mm HESH

Round 120 mm HESH having high explosive squash head of defeating target upto 2000 mtrs.

- Maximum Range : 2000 m
- Muzzle Velocity : 736 m/s
- Mass of Filled Shell : 22.52 kg
- Length of Round : 998 mm
- Weight of Projectile : 14.4 Kg
- Shelf Life : 10 years



SHELL 125 mm HE 1A

Designed for destroying enemy shelters, vehicles personnel

- Maximum Range : 5000 m
- Muzzle Velocity : 850 m/s
- Mass of Filled Shell : 22.575 ± 0.705 kg
- Max Chamber Pressure : 430 MPa
- Shelf Life : 10 years



125 mm FSAPDS AMMUNITION

125 mm FSAPDS ammunition with 3BM42 armor piercing projectile for D81 tank gun is used with T-72 and T-90 Tank

- Maximum Range : 2000 m
- Muzzle Velocity : 1700 m/s
- Weight of Round : 20.4 kg
- Length of Projectile : 566 mm
- Weight of Projectile : 7.05 Kg
- Shelf Life : 10 years

The current production capacity only supports empty shell product which will be offered as 'ready to fill' condition with an annual capacity of 300,000 shells. The portfolio will be expanded as per the customer requirement in a phased manner. The company is working on an expansion plan to add TNT, HMX & RDX production, pouring & filling capacities to eventually offer solutions in 'ready to use' condition.

RCL AMMUNITION



ROUND 84 mm HE 441B

This ammunition is fired from Gun 84 mm RCL Carl Gustaf M2 from the shoulder. The cartridge combines some of the characteristics of 14LM Rocket and Artillery ammunition in its design. The ammunition is of fixed type and is spin est- ablished. This ammunition is intended for use against troops in the open and in slit trenches, machine gun posts soft skinned transport vehicles and similar types of targets. It is fitted with a combined mechanical time and impact fuze.

- Maximum Range : 1000 m
- Muzzle Velocity : 240 m/s
- Mass of Ammunition : 3.1 kg
- Length of Ammunition : 370 mm
- Mass of Projectile : 2.3 kg
- Shelf Life : 10 years

AERIAL AMMUNITION



500 KG GP AERIAL BOMB

ARIAL 500KG GP bomb weighs 500 kilograms and has a range of up to 30 kilometers, depending on deployment conditions. It is designed for precision targeting and effective impact.

- Weight of Empty Bomb : 280 kg
- Weight of Filled Bomb : 463 kg
- Weight of Filling : 185 kg
- Length of Ammunition : 3031 mm
- Shelf Life : 20 to 30 years



PRECISION ENGINEERING &
POWERING THE FUTURE



BALU FORGE INDUSTRIES LTD

CORPORATE OFFICE :

5th Floor, Imperial Palace, 45, Telly Park Road,
Andheri East, Mumbai-400 069, Maharashtra India.

Phone: +91-22-26839916

Fax: 91-22-26842860

E-mail: sales@baluindustries.com,
info@baluindustries.com

PLANT ADDRESS UNIT 1

43 - B, Kakti Industrial Area, Kakti,
Belgaum - 591113, Karnataka, India.

PLANT ADDRESS UNIT 2

44 - A, Kakti Industrial Area, Kakti,
Belgaum - 591113, Karnataka, India.

PLANT ADDRESS UNIT 3

428/1, Next to Aequs SEZ, Hattargi Village,
Taluk Hukkeri - 591243, Karnataka, India.

PLANT ADDRESS UNIT 4

S21-03, Shed No.21, Al Hulaila FZ, Al Hulaila
Industrial Zone-FZ, Ras Al Khaimah (RAK), UAE.



COMPANY WEBSITE



www.baluindustries.com

