



GDIL GROUP

GLOBE FORGE LIMITED

LARGE CALIBER ARTILLERY SHELL

PRODUCT HANDBOOK

EDITION 1.0 | 2026–2027 CATALOG

GFL — Manufactures Empty Shells and other hardware for Defence and Military Use

This document provides standard specifications for GFL product lines. Information is subject to revision without notice and is provided for procurement, evaluation, and export-documentation purposes.

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Globe Forge Limited – Product Overview

Extended Range Full Bore (ERFB) and M107 projectile bodies

GFL manufactures 155 mm projectile bodies across the three configurations most widely used by NATO-pattern 155 mm calibre weapon systems: the M107-projectile high-explosive shell, the ERFB Boat-Tail (ERFB-BT) round, and the ERFB Base-Bleed (ERFB-BB) extended-range round. All three share a common forged-steel body type and driving-band/base-disc design, differentiated by aerodynamic tail geometry and (for ERFB-BB) an integrated base-bleed unit cavity. Each type is offered as an empty (inert, unfilled) body for propellant/fill integration by the customer.

155 mm M107-Projectile (Empty Shell)

GFL 155mm-M107

The M107-ammunition shell is the baseline conventional (non-extended-range) 155 mm high-explosive projectile, widely compatible with M107/M795-family 155 mm howitzer systems. GDIL Group supplies the body in both empty and explosive-filled configurations.

Dimensional & Material Specification

#	Description	Specification
1	Overall Length	601.98 ± 2.54 mm
2	Body Diameter	153.92 mm
3	Max. Diameter	154.71 mm
4	Finished Driving Band Dia.	157.89 mm
5	Empty Shell Weight	34.53 kg
7	Mean Internal Volume	4,350 – 4,450 cm ³
8	Body Material Grade	B14 Forging Steel
9	Driving Band Material	Gilding Metal (Copper Alloy No. 220, Annealed) per MIL-B-20292, or Copper-Zinc No. 220 “Glodgad” per MIL-B-20292

Packaging Details

Packed in 8 nos. in 1 wooden pallet.

Length × Width × Height: 700mm × 350mm × 790mm



155 mm ERFB-BT Projectile (Empty Shell)

GFL 155mm-ERFB-BT

The ERFB Boat-Tail configuration extends effective range over the M107-pattern baseline through a tapered boat-tail afterbody, which reduces base drag in flight. Body material, driving-band, and base-disc specifications follow the common 155 mm platform.

Dimensional & Material Specification

#	Description	Specification
1	Overall Length	763 mm
2	Ogive Length	655 mm
3	Max. Diameter on body	154.69-0.12 mm
4	Max. Diameter over driving band	157.86-0.2 mm
5	Material Type	Steel to SAE 9260
6	Weight of empty shell	32.3 to 33.7 kgs
7	Pressure Testing Parameter	Pressure 840 kg (min), Time- 10 sec (min)
8	Groove for driving band	Groove with knurling
9	Driving Band material	Copper Alloy to JSS-4710-01, Grade II
10	Groove for driving band	Groove with knurling



155 mm ERFB-BB Projectile (Empty Shell)

GFL 155mm-ERFB-BB

The ERFB Base-Bleed configuration integrates a base-bleed unit that reduces base drag by injecting combustion gas into the low-pressure wake behind the projectile, extending range beyond the boat-tail configuration. The body retains an integrated base-bleed cavity in place of a simple boat-tail.

Dimensional & Material Specification

#	Description	Specification
1	Overall Length	763 mm
2	Ogive Length	655 mm
3	Max. Diameter on body	154.69-0.12 mm
4	Max. Diameter over driving band	157.86-0.2 mm
5	Material Type	Steel to SAE 9260
6	Weight of empty shell	32.3 to 33.7 kgs
7	Pressure Testing Parameter	Pressure 840 kg (min), Time- 10 sec (min)
8	Groove for driving band	Groove with knurling
9	Driving Band material	Copper Alloy to JSS-4710-01, Grade II
10	Groove for driving band	Groove with knurling



Quality Assurance & Reference Standards

All GDIL Group 155 mm product lines are manufactured and inspected against the following reference framework:

- Body steel grade: B14 forging steel, certified chemical composition and mechanical properties
- Driving band material: Gilding Metal / Copper Alloy No. 220 per MIL-B-20292
- Base disc: Cold-rolled carbon steel strip per ASTM-A109M
- Explosive fill: TNT per MIL-DTL-248D; Composition B per applicable ordnance reference
- 100%-dimensional gauging on driving band, base disc, fuze thread, and concentricity
- Hydraulic pressure-proof testing: 600 kg/cm² (588.4 bar), 10-second hold
- Mechanical testing: hardness (BHN), yield strength, elongation, and (where specified) Charpy impact

Buyer-specific requirements — including NATO STANAG references, customer drawings are accommodated on a contract basis, with first-article inspection and lot-acceptance test reports issued as per buyer requirement.

Global Headquarters & Contact

GDIL Group — Globe Forge Limited

Global Sales & Support Inquiries

For technical specifications, test reports, or procurement inquiries regarding GDIL Group products, please contact our defence sales division:

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