

75mm Gauss Rounds

The 75mm Gauss Rounds were developed by [Origin Industries](#) in [YE 33](#) alongside the [OI-M3-W3303 75mm Pump-Action Gauss Cannon](#); all rounds within this classification are gauss-based, though some have additional traits that allow them to specialize in different tasks.

Stats

The following are statistics common to all variants of the 75mm Gauss Round.

- **Purpose:** [Tier 8](#), Medium Anti-Mecha
- Caliber: 75mm
- Damage Description: Dependent upon ammunition type.
- Effective Range
- Muzzle Velocity: 5,000 meters/second¹⁾
- Muzzle Blast: Medium
- Recoil: Medium
- **Energy Source:** Gauss

Round Types

The following sections describe the various types of 75mm gauss ammunition currently produced by [Origin Industries](#).

75mm Gauss Round Damage and Pricing Quickchart			
Shell Type		Purpose	Price (2 Rounds)
General Purpose Armor-Piercing High-Explosive		Tier 8, Medium Anti-Mecha ²⁾	6 KS
Armor-Piercing Fin-Stabilized Discarding Sabot		Tier 8, Medium Anti-Mecha ³⁾	5 KS
Armor-Piercing Flechette Canister		Tier 8, Medium Anti-Mecha ⁴⁾	6 KS
Directed High-Explosive Plasma		Tier 8, Medium Anti-Mecha ⁵⁾	5 KS
75mm Gauss Round Effective Range Quickchart			
Shell Type	Effective Range (Space)	Effective Range (Atmosphere)	Effective Range (Ground Level)
General Purpose Armor-Piercing High-Explosive	24 kilometers ⁶⁾	9 kilometers ⁷⁾	5 kilometers ⁸⁾
Armor-Piercing Fin-Stabilized Discarding Sabot	120 kilometers ⁹⁾	45 kilometers ¹⁰⁾	25 kilometers ¹¹⁾
Armor-Piercing Flechette Canister	24 kilometers ¹²⁾	9 kilometers ¹³⁾	5 kilometers ¹⁴⁾
Directed High-Explosive Plasma	24 kilometers ¹⁵⁾	9 kilometers ¹⁶⁾	5 kilometers ¹⁷⁾

General Purpose Armor-Piercing High-Explosive

A general purpose round designed for anti-armor and anti-mecha use - though its velocity is generally too low to be of use against nimble power armor targets.

Composition

A GPAPHE shell begins with a ballistic tip that is followed by a hardened Nerimium armor-piercing cap before the hardened main body, which contains a high-explosive mixture and fuse. Inside this hardened body are numerous mono-molecular edged fragments (measuring from one to four inches long) meant to slice into targets, while at the very base of the round is a rocket assembly of three nozzles; much like a gyrojet's stabilization jets, these rockets apply rotation to the round in order to increase its accuracy.

Performance

Upon being fired, the stabilizing rocket motors activate and stabilize the round; though these motors make the round more expensive, they allow for the round to remain accurate when flying through debris in space and are fully effective in the atmosphere. Upon impact, the hardened armor piecing cap allows the shell to penetrate armor; shortly after impact and penetration, the fuse detonates, creating a large explosion which throws out several sharp mono-molecular edged fragments.

Armor-Piercing Fin-Stabilized Discarding Sabot

Designed as a lighter and longer-ranged alternative to the GPAPHE round, the APFSDS round was intended for use as a long-range high-precision round against armored targets.

Composition

The round consists of a 75mm depleted uranium dart - sandwiched inside alloyed sabots - designed to withstand the forces of acceleration and heat from friction.

Performance

The discarding sabot round has a significantly longer effective range in an atmosphere and a higher muzzle velocity in planetary and zero-gee environments because of its lighter weight, effectively imparting higher penetration and range values at the cost of explosive power. The depleted uranium dart auto-ignites upon impact due to friction with penetrated armor and tends to over-penetrate because of its low diameter and high kinetic energy; if it does not do so, however, and stays inside, the depleted uranium burns out the interior of the target as it breaks up into fragments and ricochets within.

Armor-Piercing Flechette Canister

With the emerging presence of [power armor](#) on the field of battle, a round with higher hit probabilities against small targets was needed to ensure that [Origin's](#) armored frames had a countermeasure against being swarmed by armored infantry. Heavy anti-armor capabilities were not to be sacrificed, however - thus a flechette canister round consisting of several hundred 3mm depleted uranium darts was created.

Composition

The APF Canister round is a cylindrical canister whose main body is an aluminum outer shell designed to unfurl and release its contents upon exiting the cannon barrel. Inside the canister are three hundred mono-molecular tipped arrows whose dispersion pattern can be manipulated by minute adjustments to the barrel choke - which disrupts the aluminum case and enlarges (or shrinks) the spread pattern.

Performance

Though effective at a frame's medium range of engagement, the projectile spread makes its use prohibitive at longer distances. The round is primarily for close quarter combat and self-defense; in function, it is very much like a shotgun, but with armor-piercing properties. Its range can be extended slightly by adjusting dispersion patterns - however, this comes at the expense of spread.

Directed High-Explosive Plasma

An alternative to the standard armor-piercing high-explosive shell, the directed high-explosive plasma round acts as both a heavy anti-armor munition and a high-explosive demolition tool.

Composition

The shell consists of a hardened exterior designed to resist the stresses of acceleration; inside it is a simple plasma containment system designed to release the plasma it contains in one direction upon detonation.

Performance

Upon contact with the target's surface, the round's containment is partially deactivated and the pressure behind the remaining active containment forces the plasma forward and into the target as the entire shell continues to hurtle forward. As the round squashes against the surface, containment is eliminated in its entirety and the plasma is completely released in all directions, causing electromagnetic and thermal damage; in addition, the rounds can also be programmed to release containment all at once to allow for a larger explosion overall at the cost of penetrative power.

OOC Notes

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¹⁾

Roughly equivalent to 16,404 feet/second.

²⁾

Conventional armor-piercing, explosive, and fragmentation damage.

³⁾

Heavy armor-piercing incendiary damage.

⁴⁾

Decreases as fewer sub-munitions impact.

⁵⁾

Electromagnetic and thermal damage.

⁶⁾ ¹²⁾ ¹⁵⁾

Roughly equivalent to 14.9 miles.

⁷⁾ ¹³⁾ ¹⁶⁾

Roughly equivalent to 5.6 miles.

⁸⁾ ¹⁴⁾ ¹⁷⁾

Or until horizon, GM discretion (though it's a shotgun so it has a relatively short range); roughly equivalent to 3.1 miles.

⁹⁾

Roughly equivalent to 74.6 miles.

¹⁰⁾

Roughly equivalent to 28.0 miles.

¹¹⁾

Or until horizon, GM discretion (though it's a shotgun so it has a relatively short range); roughly equivalent to 15.5 miles.

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