

Combined Particle Cannon Technology

Information

The Dual Usage Antimatter and Plasma Accelerator Cannon is a product of a combination of two fields of Lorath weapon engineering. Both the plasma and antimatter based weapons used by the Lorath utilize the same fundamental components such as magnetic and subspace accelerators, high strength containment fields, and rapid round acceleration. Through the addition and removal of various components, the Lorath have managed to produce a combined system, which is capable of accelerating either antimatter packets or plasma streams through the same accelerator.

See Also: [combined_particle_cannon](#)

Producer Information

Designer: Lorath New-Tur'Lista Manufacturer: LSDF Manufacturing Yards (Suggested) Price: Power Armor Grade: 75,000. Starship Grade: 250,000

Nomenclature Information

Name: Combined Particle Cannon Type: Antimatter and Plasma Particle Cannon Design Type: LSDF-CPC-E-M001 Role: Anti-starship, Anti-emplacement, Anti-armor

Key Components

Subspace acceleration assembly, subspace charge assembly, magnetic confinement assembly, magnetic acceleration assembly, ammunition containment units, external power supply attachment cable, external structural assembly.

Discharge Information

Projection/ammo type: Antimatter and Plasma Firing Mechanism: Antimatter and plasma are stored in reserve tanks or generated from an attached power source. Plasma particles or antimatter particles are then routed from their holding chambers, accelerated, heated, and then charged with a subspace field. The subspace charged particles are then accelerated down a magnetic confinement barrel through the use of subspace and magnetic fields. Antimatter Maximum Range: 100 Meters in atmosphere, 200,000 Kilometers in vacuum. Plasma Maximum Range: 10 Kilometers in atmosphere, 20 kilometers in vacuum. Antimatter Impact Information: Matter/Antimatter reaction in target area, release of intense x-ray radiation which may produce sizable explosions when in atmosphere. Unfortunately due to the combined

system, the antimatter beam can not inflict the same damage as a concentrated antimatter explosion or a positron beam due to the lack of dedicated beam confinement equipment. Plasma Impact Information: Due to subspace acceleration, plasma impact locations undergo molecular disruption, this disruption causes molecular bonds to break down resulting in structural weakening. Additional damage is caused by intense heating effects. After impact, plasma plumes from the impact area in an area relative to the diameter of the beam and the amount of plasma discharged.

Damage Ratings

- Power Armor Unit

Plasma: [ADR 4](#) Antimatter: [ADR 5](#)

- Starship Unit

Plasma: [SDR 3](#) Antimatter: [SDR 4](#)

Power Armor Grade Unit

Information

The power armor grade combined particle cannon has been designed to be utilized as a service rifle for Mindy and Winter sized power armor units. These units are available in a rifle type application, and a shoulder mountable unit for the Winter power armor.

Design Information

Description

The Combined Particle Cannon in a power armor rifle application is two meters in length, one half meter thick, and one third meter in height. Outwardly visible are two large cannisters which are placed on both sides of the unit's accelerator barrel. On the underside of the unit is a trigger assembly, and on the top of the unit is a carry handle.

In a shoulder mounted application, the attachment assembly includes two accelerator assemblies attached to a mounting harness designed to fit over the Winter's shoulders and fix into place through the use of magnetic fields which synchronize with the structural layering system of the unit.

Ammunition Information

The power armor application of the unit relies on a pair of cannisters which contain the plasma and antimatter stores for the weapon. Additional plasma can be supplied from an external source if available, additional antimatter can also be supplied to the unit from an external source.

Each cannister contains twenty (20), rounds of plasma or antimatter. A power armor grade rifle assembly is capable of utilizing two cannisters of either type at a given time, a shoulder mounted assembly is capable of utilizing four cannisters at a given time.

Fighter, Shuttle, and Starship Grade Unit

Description

In starship applications, the Combined Particle Cannon's design can be varied depending on what kind of mounting there is available for the unit, the unit is also available in sizes ranging from a rifle-like size, to a full-blown starship main-cannon grade weapon. Descriptions of the weapon's structure are to be given on a case-by-case basis.

Ammunition Supply

In fighter, shuttle, and starship applications, the Combined Particle Cannon is designed to be a self-supplying unit when provided with energy from a ship's power systems. When supplied with power, the unit is capable of generating matter and antimatter through the use of an energy-to-matter conversion system. Hydrogen and oxygen are created by the unit and stored in a cannister system as water, and when plasma is needed, the water is heated and accelerated to generate plasma. Antimatter created by the unit is to be stored in a containment system.

Antimatter Note

It is urged that antimatter not be produced until it is intended to be used due to the potential hazard of storing antimatter for an extended duration of time.

Application Information

In each starship application, statistics such as firing rate, durations of fire, and beam diameter may vary, and must be detailed in the unit's information.

Weapon Mechanisms

Safety: Computer Control, Control Switch

Fire mode selector: Computer Control

Weapon Sight: Computer controlled sensor package. (Starship grade)

Gravitational Control Device: Built into the weapon are gravitational control devices designed to aid in reducing unit weight.

OOC Information

This page was made by [DocTomoe](#) on 2014/04/16 16:01.

- This was approved by [Toshiro](#) on 2007/11/17¹⁾.

¹⁾

<https://stararmy.com/roleplay-forum/threads/combined-particle-cannon.675/#post-6485>

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Last update: **2023/12/21 04:23**

