Lorath Plasma Arc Disruptor

Designer: Lorath Occhesta House Manufacturer: Lorath Self Defense Force (Suggested) Price: Small vehicle or light armor application: 1500 KS. Vehicle Application or Power Armor Application: 10,000 KS. Starship Application: 25,000 KS

Damage Rating: MDR 4 in power armor configuration, Tier 10, Light Anti-Starship in defensive vent and small configuration[1)], Tier 11, Medium Anti-Starship in offensive configuration.

Nomenclature Information

Name: Plasma Arc Disruptor. Type: Plasma based molecular disruptor system. Role: Anti-Armor, Anti-Shuttle, Anti-Light Armor, Anti-Vehicle. Length: 3-20 Feet Long Plasma Vent Strips, Variable Cannon Sizes. Mass: 10lbs per foot of strip, variable cannon weight. 25lb small generator, 50lb power armor or light vehicle generator, variable size and weight for starship application.

Discharge Information

Projection/ammo type: Molecular Disruptive Plasma Firing Mechanism: Superheated plasma is generated by the weapon (or vehicle's) onboard generator which is tied into the weapon or vehicle's power supply. The superheated plasma is then ran through a series of channelling tubes which route the plasma to its intended point of being expelled. In the case of the vent strips, the plasma is routed to these strips where the plasma is then accelerated by magnetic coils and charged by low strength subspace field coils which accelerate the plasma particles to the point of molecular disruption. The plasma is then forced out of the vents by magnetic acceleration and compression. With cannon based applications, the plasma is routed from the generator to a collector in the rear section of the cannon, once the desired yield of plasma is focused, the plasma is then accelerated by magnetic coils down the barrel, where the plasma is also charged by subspace coil which allows for particle speeds to disrupt molecular bonds. In both usages, plasma which has been forced from the firing mechanism is propelled in the direction of the intended target. If the target is hit, this will create an arc effect which would continue until the target moves outside of the weapon's range, or the arc is interrupted.

While the round progresses down the barrel, it should be noted that it is travelling at a speed below C in relation to normal space, but due to the subspace effect upon the round, the round accelerates to transluminal velocities as it leaves the barrel in relation to normal space. The subspace charge is carried along the plasma beam and will allow the plasma to continue its FTL travel until the plasma stream begins to dissipate.

Beam Diameter: up to a six inch width. Beam Arc: six inches to twelve inches. Effective Range 1-50 meters to inflict proper and continued arc damage. Maximum Range: 500 meters for a single directed burst with the strip type unit. 2500 Meters for cannon based unit. Minimum Range: 0 Muzzle Velocity: Light Speed. Muzzle Blast: With strip based units, a glow is visible along the strip's length, then when

plasma is expelled a dim purple hue is visible around the plasma vent, along with an arc of purple 'lightning' which arcs between the strip and the target. In cannon form, a single burst has the appearance of a ball of purple light. Firing Mode(s): continuous arc, stream, pulse fire, single shot burst. Recoil: None

Damage Description: On impact, the super heated molecular disruptive plasma begins to heat the target, and destabilize the target's molecular structure. A half second burst would cause organic tissue to incinerate, and level five armor to melt into its molecular byproducts. Level ten armor on a power armor application would be partially breached or weakened. If fired in a stream setting, the plasma would act like a flamethrower’s burst, but far more focused.

Discharge Information

With all settings for the “Plasma Arc” weapon, the plasma fired from the weapon rapidly decelerates after leaving the barrel, thus resulting in the plasma stream losing it’s cohesion after travelling 60 meters. This loss of cohesion is minimal until the round has progressed 450 meters down range from a strip based unit, and 2000 meters for a cannon based unit. Due to this loss of cohesion, rounds which have progressed past the 60 meter mark tend to “splash” on contact with a given target, this results in the plasma flaring outwards from the impact location in a manner much like that of a flame thrower’s burst. Rounds which have exceeded the maximum range of the weapon tend to disperse and cool rapidly, thus resulting in a cloud of harmless gas.

Ammo Description

Name: Plasma Generator Unit

- Visual Description: A canister which is approximately six inches by three inches with gas collection ports throughout its surface. A power connection plug is on one end of the unit, and a port which connects to the cannon or vent strip is also attached to the unit.
- Charge: One arc every ten seconds. One burst per three seconds for five minutes. Good for five minutes of continuous operation. After five minutes, requires an hour cool down. When attached to an external power source, the unit is able to operate for an additional 15 minutes if the external power source delivers enough power (Sources such as power armors, pistol battery packs, salvaged vehicle batteries). The generator requires a mandatory cool down every fifteen minutes if charged by an external power source.

Caution: If the Plasma Generator Unit sustains a breach while a full charge is contained in the unit, the charge inside would be released in an explosive decompression. This may result in burns, vaporizing, or even death.

Name: Vehicle based plasma generator unit.

- Visual Description: Varies dependent upon vehicle.
- Charge: Thirty second arc every three seconds. Three bursts per second for ten minutes. fifteen

seconds to rebuild a full charge.

Name: Power Armor based plasma generator unit.

- Visual Description: In most cases, it is a 24 inch by 6 inch canister, with gas collection ports throughout its surface. A power connection plug is on one end of the unit, and a port which connects to the cannon or vent strip is also attached to the unit.
- Charge: One fifteen second arc every five seconds. Three bursts per second for two minutes. sixty seconds to rebuild a full charge.

Maintenance Information

Field Maintenance Procedure: Prevent excessive dirt, grime, etc. from entering the unit's vent ports. Coolant should also be available after extended usage and applied during unit downtime. Replaceable Parts and components: Vent ports, magnetic coils, and plasma routers are all replaceable and can be replaced by a qualified technician with the appropriate tools. Generator units on smaller applications can be replaced in field.

Visual Description

On small scale applications such as on personal vehicles or light armor, the unit is applied in a vent strip format. The vent strip can vary in length but the general appearance is a metallic strip with a thickness of a half inch to two inch thickness. Thin slits are visible along the metallic strip. In thinner applications, the metallic strip has bulges along its length where magnetic coils are located. In larger applications, the strip takes on a much heavier appearance and resembles flattened plumbing pipes.

In cannon application for vehicles, the cannons have a plasma collector section in the rear of the unit which is often of a circular or cylindrical shape. Vehicular applications often have plasma routing tubes visible which connect to the collector. One or two channelling barrels protrude from this collector. Channelling barrels often have four bulges which run along the length of the barrel. These bulges are magnetic acceleration coils.

Key Component Information

Most “Plasma Arc” weapons are comprised of a high carbon material which is designed to absorb the heat given off by the plasma charging and acceleration process. The accelerator barrel for the unit is comprised of a similar carbon material with a neutronium-ferrite overlay. This neutronium-ferrite overlay is durable enough to endure the high temperature plasma which passes within it’s confines, and also serves as a high grade conductor that focuses the magnetic accelerator’s field inwards within the barrel’s area, and confining the plasma to the center line of the barrel or vent to prevent the plasma wash from burning away at the neutronium lining.

Along with electromagnetic coil accelerators, “Plasma Arc” weapons incorporate a subspace field coil

which is on all models at least 25 inches in length, two inches in depth, and two inches in width. These long coils are comprised of a very low capacity coiled wire of a metalloid/crystalline composite. This coil is designed to produce a subspace field only within the confines of the barrel of the weapon, and this coil would be unable to accelerate matter or energy past 1.0001C. Due to the limited field strength delivered by the coil, it is unable to accelerate solid objects to a speed beyond that of luminal velocity, much like the limitations placed upon hyperspace transmitter components.

With smaller units, power is a due concern. To keep the “Plasma Arc” weapon system light weight, a small canister shaped plasma accelerator comes enclosed with the weapon system. This canister is loosely based off of the original plasma containers used with Lorath Searing Blade technology. The units not only contain the plasma, but collect gaseous matter from the surrounding atmosphere and charges the gasses to a plasma state. Units intended for small arms usage present a difficulty in regards to power supply, thus the typical Lorath power source of a bacterial charge pack is included with the device. This allows for limited functionality of the unit when the unit is not connected to an external power source. Each unit includes a “Universal” power plug which includes a gel based connector, this connector can be pressed against the intended power source’s connectors and form a proper union and regulated transfer of power. After removal from the power source, the connector gel will revert to its original state within five minutes.

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shuttles, fighters