

Lorath Plasma Gathering and Containment Systems

Information

Frequently found aboard Lorath ships, mecha, and vehicles are plasma reliant systems, these systems rely on a readily available plasma supply to function. To supply power to these systems, a reliable infrastructure is required to generate, gather, store, and supply plasma to the required application. Given that a system is required, one or several systems can be found aboard Lorath vessels and vehicles to provide the essential plasma which drives their systems.

Technical Information

Plasma Gathering System

A system which is usable for both space and planetary operations is a matter gathering system which can be used to gather matter which can later be converted to plasma. The matter gathering system relies on magnetic coils to attract various atoms and molecules into a collection system which then gathers the matter and stores the raw material in a containment system. When possible, matter which is collected is combined to form safe-to-handle compounds. Energy given off by the reaction is then applied to the collector, or to other systems that the collector is attached to.

Plasma Generating System

An alternate means of supplying plasma, often found in high-demand applications, is a plasma generating system. This system relies on the energy-matter conversion technology gathered from QnS documentation. Plasma is generated by supplying an energy to matter converter with electrical power, which is then converted into a form of matter such as hydrogen, oxygen, helium, or another easy to work with form of matter. When the matter is generated, it is then stored until needed.

Matter Storage

There are two means of storing matter gathered to be used as plasma fuel. The primary and simplest means is the use of a pressurized containment system. Unfortunately, this system is prone to explosive decompression if breached, thus it poses a risk to individuals and vital systems surrounding the unit.

The second method of storage is the use of a magnetic containment system enhanced container, this system provides a redundancy to the containment of the pressurized matter, thus providing an additional

degree of safety.

When possible, gathered matter is converted into a compound which is less dangerous than the original components.

The Matter Of Application

When plasma is required, matter which has been gathered is routed from containment to a heating and acceleration system. The heating and acceleration system relies on several various methods depending on the application, some systems also rely on multiple forms of heating and acceleration in one application.

Laser Heating and Acceleration

The primary method utilized for the creation of plasma is a laser system which is used to heat and accelerate gaseous matter until it is at a temperature where it converts from a gas to a plasma state.

Microwave Heating

For low pressure plasma systems, a microwave system is used. Matter is routed from the containment system and routed into a heating chamber where high intensity microwaves are passed through the matter, resulting in the gas being rapidly heated to a plasma state.

Electrical Arc

In high power systems, an electrical arc system can be used to heat the matter into a plasma state. The electrical arc system relies on creating a high voltage electrical arc between two conductive surfaces. The matter to be converted into plasma is passed through the arc and converted to a plasma state.

Now You're Cooking With Plasma

Once the plasma has been generated, it is then routed into a plasma routing system which utilizes a magnetic field system to contain the plasma while moving it fast enough to maintain its charged state. In many Lorath applications, a subspace charge is applied to the charged plasma, resulting in it gaining additional speed, and a molecular disruptive effect. Plasma generated and routed can then be applied to weapons, power generating, shield systems, or even cooking.

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