High Output Nuclear Energy

The <u>High Output Nuclear Energy</u> series of reactor, or HONEY series, is a project by Origin Industries which produces fusion generators that have the output of an Aether generator, in a much more compact, reliable package than contemporary fusion power plants.

About

The HONEY Reactors were part of a project to create compact, reliable, and powerful reactors in order to power equally compact, reliable, and powerful small craft, Powered armors, and spacesuits. The only way to achieve this, however, was to use exotic materials, which cause the reactor to glow when in use, an effect which some people may see as a plus.

General Information

- Name: High Output Nuclear EnergY
- Type: Powerplant
- Designer: Origin General Manufacturing
- Manufacturer: Origin General Manufacturing

Common Features

All HONEY reactors glow during operation. When a reactor is cool, or low on fuel, it will glow a deep red, and will get brighter as it reaches optimum temperature, eventually glowing a bright golden yellow. When a HONEY reactor is overheating, it will glow bright white, and let off small, sparkling flakes of its outer casing, in an attempt to help cool the device. However, once a certain amount of the casing has flaked away, the reactor will vent all fuel and shut itself off in order to prevent a dangerous blowout that could kill the user or destroy the craft the reactor is attached to. The Outer casing may be replaced once the unit has been shut off and cooled down sufficiently, instead of needing to be completely replaced.

When a HONEY reactor is operating at or below optimum temperature, the outer casing, while glowing, will be cool to the touch. Above optimum temperature, it will begin to gain heat, and when it turns white and begins flaking, it is hot enough to burn skin and melt many kinds of plastics.

All HONEY reactors have the output of an equivalently sized Aether generator, but are limited by fuel supplies, although in many situations the fuel supply will be more than sufficient.

A 'Fuel Supply' for a HONEY reactor is simply a bottle, tank, or similar container which contains the fuel used by the reactor, typically Hydrogen, although a HONEY can use a number of gaseous and liquid fissible materials. A fuel supply can be reused, but as a pressurized vessel, must be checked regularly and replaced if it has an issue.

All HONEY reactor fuel supplies may be re-fueled from an external source while still mounted to the generator, provided there has been a refueling port added into the design of whatever is utilizing the reactor. Many HONEY reactors have removable and replaceable Fuel supplies, which work via a pressure-holding quick-disconnect system for ease of service. On smaller fuel sources, this Quick disconnect is the only attachment needed, but for larger fuel supplies, straps, clamps, or bolts must be used to hold them securely.

Types

There are several types of HONEY reactors, each with a specific application and features.

DROP

The smallest HONEY reactor, it is designed to power small drones, and objects smaller than the size of an average person. The HONEY DROP is approximately the size of a person's fist, with a fuel supply half the size. This Reactor can operate for up to 48 hours, depending on the application. unlike other reactors, the DROP cannot have its casing replaced, and must be replaced entirely if it overheats.

• Price: 50 KS

PUNCH

The Second smallest HONEY reactor, the PUNCH is sized perfectly for a Space Suit. About the size of a water bottle, it can power such systems as propulsion, sensors, and life support, as well as many other auxiliary systems. Its fuel supply is roughly equal in size, and is especially designed to be easy to replace, as well as have several mounted in Parallel. For each fuel supply connected, the PUNCH can run for roughly One week on normal power.

- Prices-
 - Reactor: 100 KS
 - $\circ\,$ Regular Fuel supply: 50 KS
 - $\circ\,$ Double fuel supply: 90 KS
 - Casing: 20 KS

BURST

About the size of a Human Head, the HONEY BURST is sized specifically for Powered armor. It is able to power Propulsion, sensors, life support, Artificial Intelligence, certain weapons, and many other auxiliary systems. Its fuel supply is roughly equal in size to the generator itself, and can have several attached in Parallel. Like the PUNCH, the Fuel supply is very simple to replace and refill, and can even be replaced on the go without tools, as long as the suit it is attached to has power. The BURST has roughly enough fuel in each fuel supply unit to run the generator for a week of normal operations.

- Reactor: 1000 KS
- Regular Fuel supply: 300 KS
- Double fuel supply: 500 KS
- Casing: 200 KS

CRUSH

The HONEY CRUSH is sized to power a Mecha, specifically one smaller than 5 meters, and is roughly the size of a person curled into the fetal position. Multiple CRUSH generators are needed to power larger craft. The CRUSH is able to power Propulsion, sensors, life support, Artificial Intelligence, certain weapons, and many other auxiliary systems. The fuel supply is variable in size, but the standard is the same size as the generator, and powers the unit for up to a week of normal operations.

- Prices-
 - Reactor: 5000 KS
 - Regular Fuel supply: 500 KS
 - Double fuel supply: 900 KS
 - Triple Fuel Supply: 1200 KS
 - Casing: 300 KS

SLAM

The HONEY SLAM is made specifically for small craft and light starships, such as Shuttles. Unlike the other types, its dimensions are variable, but can be no less than one third of a meter in any direction. Standard dimensions are two square meters. The fuel supply is roughly equal in size but can be larger, and is likewise variable, but, unlike the other types, must remain fixed, as it is built into the craft it supports. The HONEY SLAM generally has enough power for a Month of normal operations, but this varies by application and fuel supply size.

• Prices-

- Reactor: 8000 KS
- Regular Fuel supply: 900 KS
- Double fuel supply: 1200 KS
- Triple Fuel Supply: 1600 KS
- Quadruple Fuel Supply: 2500 KS
- Casing: 600 KS

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