Hephaestus Fleet Yard

1. About the Hephaestus Fleet Yard

The Hephaestus is the result of NovaCorp's increasing need for ship construction capability, and is designed so that it will be able to supply for NovaCorp's needs for many years to come. It has a very large construction capability, in comparison to NovaCorp's size, and is equipped with a relatively high tech automated construction system that redirects resources and controls the state of the art construction drones, which allows for very efficient construction with near perfect co-ordination. It also has heavy shielding and enough firepower to take out most threats that might comes its way, not including threats which might require NovaCorp requesting the assistance of the Star Army. It has a very small human crew as they are not needed; the construction system can handle most problems and even has some ability to modify designs (although it has to check with a high rank human).

2. History

There is currently one Hephaestus built; it is in the Kohana Cloud. It was started in YE 27 and completed in YE 28 in Kohana Cloud by NovaCorp. Two additional yards of this class are planned and one is planned to go with the YSS Destiny Colonization Fleet.

3. Statistical Data

Organizations Using This Vessel: NovaCorp Type: Fleet Yard Class: No-H2-1a "Hephaestus" Designer: NovaCorp Manufacturer: NovaCorp

Crew: A minimum of one operator. **Pilots:** 75 (2 officers, 20 security, 50 engineers/maintenance) Maximum Capacity: 200 people

Appearance,

Six enormous elongated hexagons surrounding a core comprised of a larger central elongated hexagon. In this a hexagon is a shape with eight sides, and each of the 'bays' look vaguely skeleton like, depending on their level of extension.

Dimensions

- Length: 500 meters (central core) Four of the six bays can expand to fit any ship up to the size of a 300 m and have a resting length of 100m. Two of the bays can stretch to a maximum size of 500m and a resting length of 200m
- Width: 500 meters (central core) Four of the six bays can expand to fit any ship up to the size of 300m and have a resting width of 100m. Two of the bays can stretch to a maximum width of 500m and have a resting length of 200m
- Height: 750 meters (central core) Four of the six bays can expand up to the maximum size of 600m and have a resting Height of 200m. Two of the bays can stretch to a maximum of 1000m and have a resting height of 400m
- Decks: 15 decks in the central core are habitable, at 2.5 metres each.
- **Storage Capacity:** Each of the Hexagons can contain a ship of 300m x 300m x 600m or an equivalent to that. One of the giant hexagons has been given over to the formation of ALCS and Midges

4. Performance Statistics

Speed (SL): The fleet yard has no SL drive Speed (FL): The Hephaestus has a hyper spatial fold drive which can propel it at around 5LY/minute. Range (Distance): There is no range that the Hephaestus can not travel too using its Hyper Spatial Fold drive and repairing itself, however it is not planned to go outside the Kohana Cloud in the foreseeable future. Range (Support): The Hephaestus has a very efficient recycling system which means that supplies of food and water only need to be replaced every six months, but for convenience are replaced monthly. It can be pushed to supply a 200 crew for a year, or a smaller crew for longer. Oxygen does not to be replaced. All the systems of the fleet yard are completely self repaired by the construction drones.

5. Inside the Hephaestus

Construction Yard (6):

Four of these massive hexagons have resting size of 100m by 100m by 200m but can expand themselves to maximum size 300m by 300m by 600m. Two of the Construction Yards are especially large however, and measure 200m by 200m by 400m when at rest, and a maximum size of 500m by 500m by 1000m. Over the inside of their vast surface is a number of graviton modules which manipulate pieces of metal and so forth to make the shell and inner workings of the ship. In the minor bays there are 60 along each of the main bars that make up the yard, and 10 at each of the joiners, with a total of 440 graviton modules. In the major bays there are the same number on the main bars, but 10 on each of the 12 joiners, with a total of 480 graviton modules.

Standard Quarters:

These are the quarters that belong to the main body of crew in the Hephaestus. They are very Spartan, and consist of two comfortable but plain bunk beds one above the other, and are recessed into the wall. Connected to each of the bunks is a foldout screen which can be used either as a writing surface, or as an interactive terminal. On the opposite wall there are two chest of drawers, one for each of the occupants. The rooms dimensions are 5mx5m and there are 98 quarters.

Overseer Quarters:

These quarters belong to the Overseer and the Vice-overseer, and are in fact a small complex of rooms, including two bedrooms, a personal gym, a lounge with a direct interface to the central AI. The bedrooms are one step up from the standard quarters, with more comfortable beds, a wardrobe, a chest of drawers, and a writing desk (with inbuilt computer and bio-neural interface). The personal gym includes a personal trainer program, and a variety of athletic equipment, and a large variety of performance improving drugs. The lounge is simple, with a comfortable sofa, a pair of comfy armchairs, a fire, and a large screen which is an interface to the central AI. The armchairs also have a holo-net field around the head, which allows the seated to surf the AI. The entire complex has a Atmospheric Modulator that can make the rooms hot, cold, humid, dry, windy, or anything else the occupant desires. It is precise enough to have several such conditions in the same room as once. The Bathroom, has a Jacuzzi, a shower and several basins.

Toilet Facilities (2):

One facility for men and one for woman, simply a line of twenty cubicles opposite a line of basins.

Shower Facilities (2):

One facility for men and one for women, a two part room, one half is a changing facility, the second a room with ten shower cubicles.

Mess (2):

The room in which the crew eats. Only one will be used normally due to the fact that the Fleet Yard will have less then half the amount of people that it can house living in it. The Mess consists of ten tables, each capable of seating 6 people, spread across the room. Along the walls there are autochefs, molecular binders that can create thousands of different meals, through a low power particle accelerator, a differential gravity field and an unoccupied computer. The autochefs don’t work if the central AI is busy with something.

Corridors:

The Corridors of the Hephaestus are very Spartan, plain metal walls and a thin carpet for friction. There are panel lights illuminating the corridors from the ceiling, and there are consoles at irregular intervals.

Gym:

This is the room in which the crew keeps fit through their long stay on the Hephaestus. It has many different kinds of workout machines, and holo-generated personal trainers. There is a large store of performance enhancing drugs to the people who wish for them, and who take them within the prescribe amounts. It has a boxing ring.

Lounge (4):

Only half of these lounges are going to be used for the same reason only one of the Mess' is going to be used. The Lounge has a variety or relaxing activities, such as snooker, chess, and plenty of televisions connecting to a huge movie database and all the recognized news channels (and all channels really). There are small consoles available in the lounge which serve as a portable TV, Computer and writing tool.

6. Ship Systems

Hull:

The Hull is made from perfect diamond and covered with carbon-ring plating. The inner structure is made from a combination of foamed steel-titanium and foamed perfect iron.

Primary Shielding:

A powerful energy shield capable of absorbing 7.5 terawatts per meter per second.

Secondary Shielding:

This is a conformal energy shield covering the central facility, it doesn't cover the construction yards. It can absorb 2.5 terawatts per second per meter.

Ablative Shielding generators:

These generators, placed all around the ship, detect incoming weapon fire, or predict where it will be,

and reinforce the shields at that point. If a the shield is damaged then the ablative generators can be used to re-enforce it.

Gravitic Shielding:

This shield creates 5g (5 times earth standard gravity) of push on any object that enters it, repelling or slowing most projectiles.

Inertial Dampeners:

These greatly reduce the inertia and number of G's acting on someone, thus making sure that the high speeds don't cause discomfort or health risks.

Automated Construction System:

This is a network of AI's. Each of the Construction Bays has its own AI, charged with the construction of ships, and the central and most powerful AI is in the Hub. The Hephaestus is controlled by 6 separate AI's, one for each of the construction bays, and a central AI that governs them and controls the hub. The AI's take care of the complex task of navigating the resources, and using the Graviton Beam Projectors and construction drones to build the ships. The AI's control all the weapons, drones, and internal system of the fleet yard. The computer are high-density, nano-scale parts, using a new trinary code system designed by NovaCorp, allowing for an increase speed and memory approaching a magnitude of ten. They also use DNA systems, and 'living' components, as well as some reasonably basic quantum hardware.

Communications:

The Hephaestus has several different modes of communication open to it:

* Hyperspace: An alternative method of faster-than-light transmission. * Laser: For close-range transmissions, it is more difficult for the enemy to intercept, because they have to be in the area of the beam. Also limited to light-speed. * Radio: Full spectrum, Dual-Modulation, range theoretically unlimited except by interference. Practical range is short, since the waves only travel at light-speed. * Subspace: Allows faster-than-light transmission. A standard means of communication.

Weapons Systems:

Beam Xaser turrets (128):

This weapon fires a very powerful and concentrated high energy X-ray lasers, dealing reasonable damage

and very effective against lightly shielded targets. Several turrets targeted at the same place can deal considerable damage to even large ships. The Xaser turret is controlled by the central control system, which makes them fire in concert and with great accuracy.

Location: There are 22 on each of the construction sections. Primary Purpose: Anti-star fighter Secondary Purpose: Anti- Starship Damage: Medium-high Range: High Rate of Fire: 3 second beams with half second gaps between Payload: Infinite as long as the power source is functional

Particle Cannon Turret (12):

This turret fires superheated particles at near the speed of light at an opponents ship, dealing impressive damage to the ships shields due to large surface area, kinetic deceleration and rapid temperature transfer, and can also deal decent damage to a hull thanks to kinetic force and heat. The cannon can either fire with a high concentration of gas, which means it has more of a punch, or to make it more dispersed which disrupts shields more by interacting more with them. Each Cannon is in a quad-gun format.

Location: There are 12 over the surface of the Hub Primary Purpose: Anti-star fighter Secondary Purpose: Anti- Starship Damage: High Effective Range: Short Rate of Fire: 1/second, or 4/4seconds Payload: Infinite as long as the power source is functional and there is atmosphere in the station, or gas around the station (they are in a cloud).

NovaCorp Antimatter Containment Warhead Launchers (10 x 4):

Located on the outer hull of the Hephaestus in ten groups of for launchers. These missiles use antimatter but instead of creating a matter/anti-matter reaction within the missile, when the missile gets very close to the target if the shields are down it opens up the front of the missile and projects the antimatter forward, so it interacts with the target instead of the missile. This leads to more damage and the annihilation of some of the material, as well as having the point of energy closer to the target. When fighting a shielded target the missile lets the anti-matter interact with itself creating the usual explosion.

Warhead: NC-ACW-01 (Antimatter Containment Warhead) Purpose: To destroy the hulls of ships or to destroy shields Damage: 5 megaton explosion plus annihilation of some of the target Range: 500,000 miles Rate of Fire: Individually, or in volleys of 1, 2, 3, 4, 5, or 10 from each pod. Payload: 200 Missiles each.

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