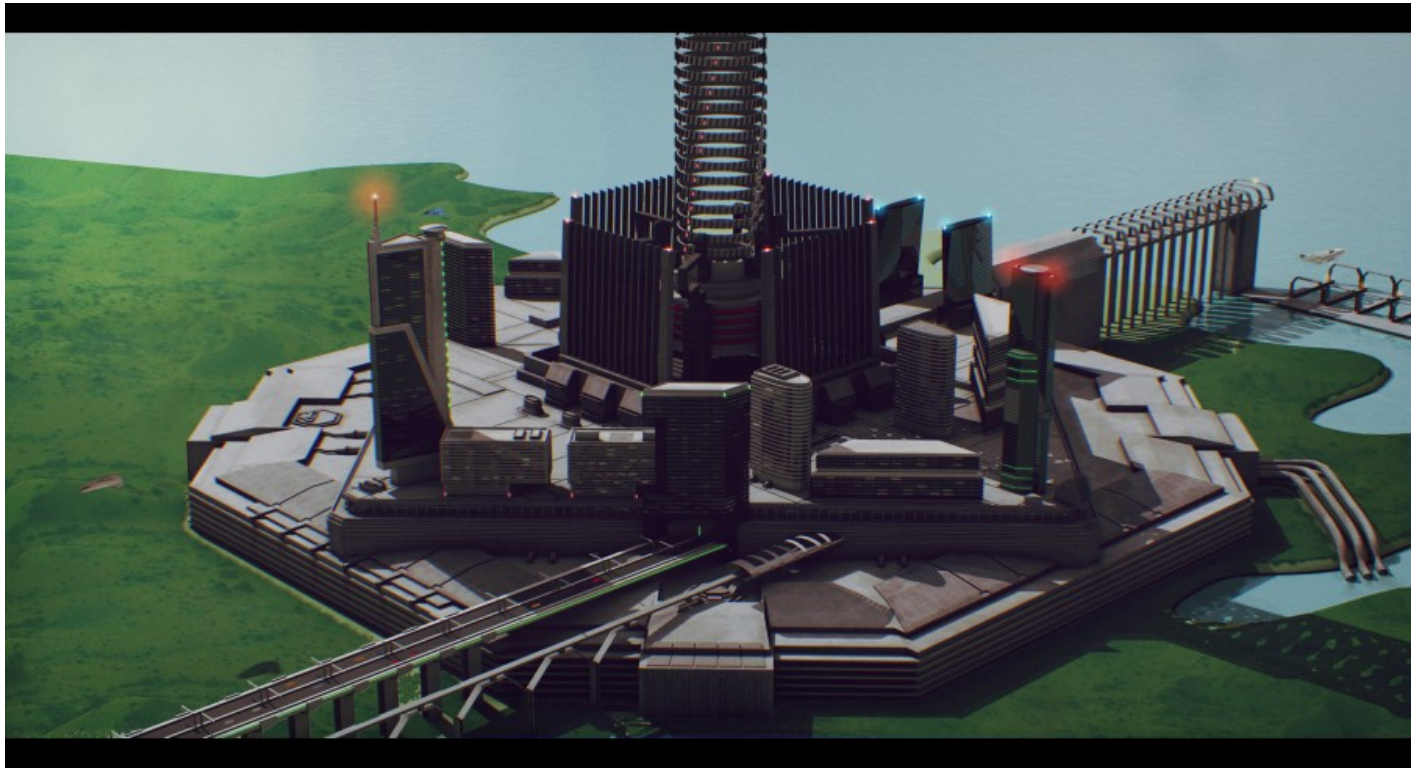


# Neshaten Orbital Tower



Orbital Towers have been a mainstay within the [Kingdom of Neshaten](#) for many decades, although their original appearance was back in ER 384, they have sense gone through a myriad of upgrades and refits in order to keep them constantly up-to-date with current level technology.

Due in large part to storms, the base of the structure and the shafts are some of the most architecturally sound structures built on the surface of a planet and often have large cities built around them.

## History

Orbital Towers as mentioned before have been around and part of the Neshaten since the early ER 384. Their resurgence came about as the Neshaten did not want to rely on chemical based rocket systems to get supplies and people into space, as that would end up polluting the atmosphere and create a dangerous ring of debris brought about by the ejecting of booster rockets and other kinds of propulsion systems.

Neshaten engineers knew, however, that chemical based rockets would 'have' to be used at least for the initial construction phases of the tether - this included the orbital station that would help anchor the tether to space and also help drive the massive cables that would be needed to help keep the elevator in place. Because the first tether was built on Nesha Prime, this presented a number of engineering challenges due to the high winds (often clocking at over three hundred kilometers per hour) and had required engineers to research and create whole new technologies in order to account for these problems. This lead to cables that were very thick, not to mention quite heavy, and made out of

materials that would later be used in the construction of starships and even the reinforcements of buildings.

During the initial design phase for the tether, Neshaten Engineerings in cooperation with the Monarch decided to do a few things with the main complex to help make the structure more resistant to not only attacks from terrorists but also a place of commerce and trade and industrial. Parts of the complex were designed to be used exclusively by the tether itself, such as administration wings. While other parts, such as maintenance, and emergency services would be available to all and could also be used to help augment a nearby cities services in the event of a catastrophe.

In ER 754, a new concept came about to use the Orbital Towers are part of a ring-structure; this has lead to engineers looking into the possibly of constructing [Orbital Rings](#). In 770, the first vestiges of the [Orbital Ring](#) were started.

## Complex Layout

The following is the general layout of a tower Complex.

Name	Purpose
Administration Wing	Operates the complex
Maintenance	Maintains all systems and buildings
Emergency Services	Responds to all Emergencies
Commercial Towers	These are towers were trade families can have offices, which makes trade and the transport of goods easier for those groups
Industrial Towers	Small manufacturing plants that help augment a city or that assist the complex in repairing damaged buildings
Trade centers	Centers of trade where people can go to purchase items from merchants without needing to go to a city center to do so
Elevator	The mainstay of the complex is the large elevator in the center, this elevator is held in place by eight massive cables
Dockyard	located toward the back of the complex, the dockyard is used by naval ships to unload cargo to be sent into space
Landing Pad	Landing Pads are pads for shuttles or passenger ships to land upon and unload their passengers either for the tether or for entry into a city
Military Hangers	Found on most specialized structures, the military hangers give the Space Tether the ability to protect itself in the event of an attack, the hanger has enough space for six squadrons of fighters

## Components

A list of components used by the complex.

## Elevator

The Elevator is the main component of the complex, it's length varies depending on what planet it is built on. The elevator is held in place by up to eight super-massive cables that are used to help distribute the weight of the tower but also to keep it from toppling over or being destroyed in heavy wind storms.

The Elevator is designed to allow for multiple cars to run along it, with one car running along one side and another on the other side. Cars travel at roughly one hundred miles per hour at their peak, a set of emergency systems is designed to 'reverse' a cars course in the event of a problem in the elevator ahead of that cars path, such as a breakage.

The Elevator connects to an anchor station just above geosync orbit.

## Cables

Eight cables, and potentially more, help keep the elevator tethers to the ground. These cables are made out of a number of reinforcing material and designed to withstands temperatures in excess of four hundred degrees Fahrenheit and a wind-speed upwards of two hundred and sixty one kilometers per hour. These cables are maintained constantly, with a dedicated team that checks every part of a cable ensure there is no wear and tear that could damage or disconnect the cable from the elevator.

The cables are buried almost three miles beneath a planets surface.

## Cars

The elevator uses two different types of cars, one meant for passengers and another meant for cargo.

### Passenger Cars

The passenger cars are able to carry twenty people and their luggage, there are windows on all sides that are reinforced to withstand the effects of going in and out of a planets atmosphere.

The bottom of the passenger car has a set of emergency grav thrusters, which are designed to slow the car down in the event of a freefall.

### Cargo Carrier

Cargo Carriers allow the elevator to ferry cargo to and from the planet; the carrier has a load capacity of ten tons and is designed to ferry both perishable and non-perishable goods but is 'not' intended to ferry live animals or people (due to the absence of personnel to cater to their needs)

Unlike the passenger cars, the cargo-carriers lack emergency grav thrusters due in large part to their

small size and the weight.

## OOC

Artwork is commissioned work done by AdamKopal

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