

Paa-Zem Advanced Construction Pod

The Paa-Zem is a redesigned version of the Paa construction pod, designed to be utilized for construction projects in various extreme environments.

About the Ship

The Paa-Zem has been designed to serve the Lorath Matriarchy's needs for fast-paced construction with optimal safety for workers while delivering optimal results. The Paa-Zem's design is based primarily off of the original [Paa Construction Pod](#), and the design is meant to be utilized in situations requiring tools which the Paa can not support, or in environments which the Paa's design was not intended for.

Key Features

The Paa-Zem's design is based off of the newest affordable technology which the Lorath Matriarchy has available to its design engineers. Through the utilization of high-grade technology, the Paa-Zem is capable of surviving in and being productive in extreme environmental conditions.

The primary features of the Paa-Zem's design is really a carry-over from the design of the Paa. Features such as the manipulator arms, easily modifiable structure, and compact systems are a legacy established by the original Paa design. However, the Paa-Zem also includes technology which ensures safety such as a thicker hull, and low-strength shield generator units. Productivity is also increased through the strengthening and enhancement of the unit's manipulator arms.

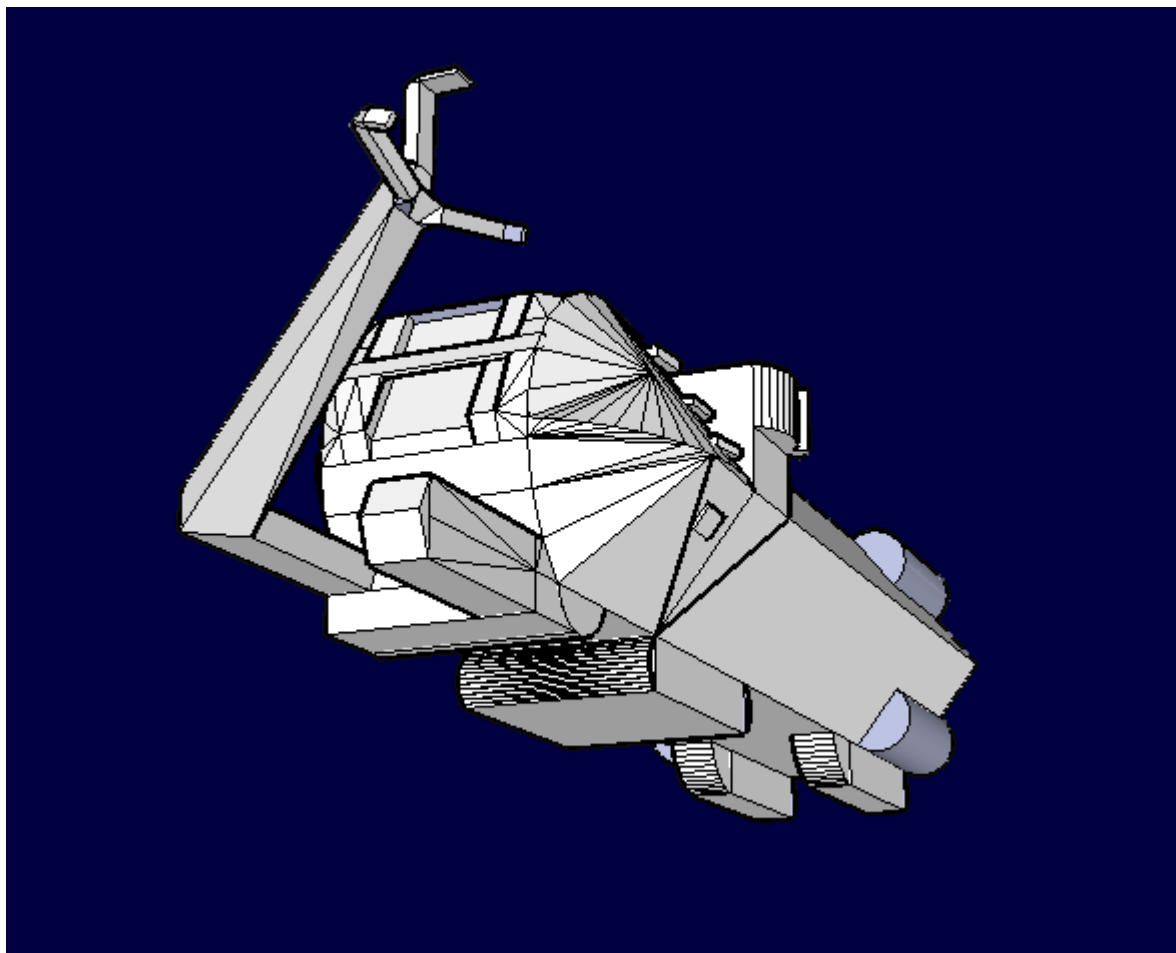
Mission Specialization

Construction, Salvage, Demolition, Hazardous Environment Reconnaissance.

Appearance

The Paa-Zem has the appearance of a long hexagonal shape with a sphere at the end of it. Attached to the bottom of the sphere shaped pilot pod, there are two manipulator arms which would be used for construction work.

Temporary Rough Rendition



History and Background

Since the reclamation of the surface of Lor, the Lorath have utilized over half a dozen variants of the 'Paa' work pod. The Paa-Zem is the 7th incarnation of the design and incorporates a higher grade of technology than the Paa which came before it.

The Paa-Zem variant of the Paa was deemed necessary when the Lorath Matriarchy was forced to leave Lor and expand outward. Due to the hostile nature of many of the new planets that the Matriarchy had discovered, and the need for the swift construction of new ships, buildings, and other large structures, the Lorath found a need for the newer and efficient design.

Statistical Data

General

Class: LCP-007 Type: Construction Pod Designers: Lorath Matriarchy Manufacturer: Lorath Matriarchy,

LSDF, New Tur'lista, Licensed Manufacturing Shipyards. Production: Slated for mass production, 300 initial production. Fielded by: Lorath Matriarchy, civilians, and organizations which purchase licensing to utilize and produce the pods. Cost: 20,000 KS

Passengers

Crew: 1.5 Maximum Capacity: 2.

Dimensions

Length: 6 meters Width: 2.5 meters Height: 3.5 meters Decks: 1 Mass: 25525 Lbs

Propulsion and Range

Low-Power Plasma Drives and Thrusters: .05c Gravity Distortion Unit: 90 Kph Magnetic Hover and Motion Coils: 350 Kph Ground Mobility Treads: 190 Kph Range: 2 AU Lifespan: 2 – 4 Years with heavy usage. Refit Cycle: Whenever the unit is idle and has access to maintenance equipment and upgrades.

Inside the Paa-Zem

Pilot Pod

The Pilot Pod is just as it sounds, a small pod used to house the pilot, and the controls for the Paa-Zem. The Pilot Pod has a single leather seat, with a fold out seat behind it for a single passenger (The passenger would have VERY little legroom.). Control configurations often vary dependent upon the operator's preference and the assignment of the construction pod.

Fuselage Interior

The central fuselage of the Paa-Zem is intended to be used as a storage area for construction materials, thus for the most part it is a hollowed out shell with doors on the bottom and top of the hull.

Compartment Layouts

Fuselage Interior

The interior of the fuselage is a mostly empty storage area, which has access panels which make up the walls of the interior. These panels allow access for maintenance of components, and the addition of

interior components. The panels can also be locked down, and the handles for these panels can be utilized as tie-down points for loads to be carried within the unit.

Ship Systems

Armored Hull and Hull Integrated Systems

Carbon-Nanotube Hull

The hull of the Paa-Zem is comprised primarily of Carbon-Nanotube material, allowing for a robust structure capable of enduring pressure extremes and atmospheric extremes.

Damage Rating

Armor Structural Points 15

Stonethread Fiber Laminate Paint

The hull of the Paa-Zem has been painted with a specialized stonethread fiber laminate material which encases the hull in an additional coating of protective material. The stonethread laminate has been specially formulated to provide insulation against cold, heat, energy discharges, and hazardous radiation. However, due to the thin application of this laminate, it is unable to endure sudden shocks such as high-speed collisions, and unable to endure excessive energy discharges, such as plasma flares.

Power-System Access

The hull of the Paa-Zem incorporates a number of panels which allow access to the unit's power system, allowing for the unit to provide power to external components.

Attachment Points

The same panels which conceal the Power-System Access points, also have mounting brackets hidden behind them. These mounting points allow for additional components to be added to the Paa-Zem as needed, and the proximity to the power-system access allows for these additions to be powered by the unit.

Primary System Housing and Piloting Module

Pilot Pod Portion

The pilot pod is an almost spherically shaped pod intended to house the control systems and pilot of the Paa-Zem. The majority of the pod is constructed from the same hull material as the majority of the pod, however, a high-strength transparent carbon-nanotube window has been incorporated into the front end of the pod. A shutter system is included in the structure of the pilot pod allowing for the transparent section to be closed.

Inside of the pod, in a standard configuration, there are three control and display panels, these panels are used to monitor and alter the Paa's functions. Piloting of the Paa is accomplished by the use of a neural interface system, and a pair of electronic interface gloves. The pilot pod includes an air storage and recycling device, emergency pressure suit, first aid kit, waste disposal tube, and feeding tube.

The pilot pod can be accessed by utilizing built-in steps incorporated into the forward section's exterior, the pod is entered through a hatch located on the top of the unit. An additional extension can be added to the hatch to allow for a small airlock to be attached to the hatch upon the user's request.

Engineering Portion

The engineering workings of the Paa-Zem are housed in a section directly behind the pilot pod, and can be accessed by the pilot while the unit is deployed. The engineering section houses the plasma containment and collector system, thruster systems, gravity field generator, power capacitors, conventional computing components, life support, and other such systems.

ARIA Housing

Located behind the pilot seat is the access hatch which allows access for the ARIA containment section of the pilot pod. Usually, the Paa-Zem utilizes a Non-SI ARIA unit.

Mounting

The rear of the Primary Module includes a set of magnetic and mechanical docking clamps which fix the module to the fuselage of the unit.

Computers and Electronics

The Paa-Zem utilizes both the [Non-SI ARIA and Common Lorath Computing packages](#).

Emergency Systems

First Aid

A [portable first aid kit](#) is included beneath the seat of the pilot module.

Ejection

The pilot module can be ejected from the module housing and can propel itself through the utilization of a gravity manipulation device. The pilot module can sustain life support for one week on the most minimal of power consumption settings.

Sealing Compound

An automated network of conduits is built into the hull of the Paa-Zem, these conduits include a sealing compound which is released into damaged portions of the hull. The sealing compound automatically seals the breach of the hull and prevents atmosphere containment failure.

Automated Beacon

A subspace transmitter beacon is included in the pilot module and is designed to automatically activate if the Paa-Zem sustains crippling damage or the pilot pod is ejected. The beacon can also be manually activated, or can be configured to be activated on pilot death.

Flare Launcher

A five-round flare launcher is incorporated on the top side of the forward module, this launcher utilizes 40mm signal flares to alert passing units of distress.

Emergency Capacitor

An emergency capacitor is included in the primary module. This capacitor is designed to provide one-week of power to the pilot module's life support systems.

Life Support Systems

Air and Water

The air and water supplies of the Paa-Zem rely on two separate systems which both utilize filtration systems and nanomachine treatment systems to recycle liquid waste and air to be utilized by the pilot for up to two weeks.

Waste Disposal

A pair of waste extraction ports are built into the seat of the Paa-Zem. These waste extraction ports are self-cleaning tubes which insert themselves into the pilot's waste-orifices and allow for the pilot to release waste and have the waste processed by the Paa-Zem for power, or water. The tubes which enter the pilot are designed to be compressed to a very-small width upon entry, and on entrance they increase in width within the pilot to create an effective seal and hold themselves in place while the pilot utilizes the system. Upon the completion of the waste extraction, the tubes re-compress and remove themselves from the pilot. The tubes are also designed to be compatible with various atmosphere-containment suit waste ports.

Pilot Note

Be sure to lower pants before unit activation. Remember that the waste disposal unit's usage is purely optional while operating the Paa-Zem, and does not need to be utilized to properly pilot the Paa-Zem.

In the event of leakage: Please utilize a vacuum device to catch stray matter. A small hand held unit is included and is stored under the seat.

Power Systems

The Paa-Zem utilizes [fusion, plasma, and bacterial](#) power systems. In some models, an optional magnetic-cycle motor can be included for long-term low-power supply.

New Addition

When possible, Paa-Zem pods have been enhanced with the recently developed [QNC](#) power cell.

Communications Systems

The Paa-Zem utilizes [common communication](#) methods, but can be outfitted with subspace radio technology and be made to be compatible with PANTHEON systems.

Propulsion

Flight

The Paa-Zem includes [magnetic](#), [plasma](#), and [gravity](#) based propulsion systems. However, the gravity propulsion systems are primarily intended to be utilized for slow maneuvers.

Land

The Paa-Zem's fuselage includes three sets of motor driven treads which provide the Paa-Zem with locomotion on ground assignments. Magnetic or gravity-positive plates can also be included in the treads to allow for the usage of the treads in zero-gravity environments.

Sea

The Paa-Zem's gravity manipulation system and magnetic systems can be utilized to propel the unit in underwater environments.

Shield Systems

The Paa-Zem includes [EM and Gravity shielding](#) systems, designed to reduce damage which may be caused by hazardous environments or work-site accidents.

Damage Rating

Shield Points 12

Optional Psionic Scrambler

The Paa-Zem can optionally be outfitted with a [Psionics Scrambler Device](#)

Manipulator Arm System

The two manipulator arms are robotic arms that are attached to the forward section of the fuselage, and the module which houses them extends beneath the Pilot Pod. The manipulator arms are meant to be used to move materials, and manipulate these materials in a constructive manner, but, if necessary, the

arms could be used as a destructive tool.

Optional Load Out

An optional load out for the Paa-Zem includes up to two more additional sets of manipulator arms which can be attached to the fuselage to allow for easier unloading of payloads.

Anchor Launchers

The anchor launchers are located in the rear and forward areas of the Paa-Zem on the top and bottom sides. These launchers are used to launch a diamond tipped harpoon or grappling hook. The anchor is propelled from the launcher by a solid fuel charge and is attached to the launcher by a stone thread cable. The launchers are housed behind panels to prevent work-site debris from interfering with the units, and to prevent accidental harpooning.

Tools Explanation

Due to the highly modular nature of the Paa-Zem, a standard listing of tools is difficult to present, however, it is noted that tools that could be attached to previous Paa models are compatible with the Paa-Zem. 'Hand' modules are also available for the manipulator arm systems to allow for conventional tool systems to be utilized by the Paa-Zem.

Manipulator Arm Tools Included With Each Unit

Plasma Arc Welder/Cutter

A welding tool based on the [Lorath Plasma Arc Disruptor](#).

Magnetic Rail Riveter

A rivet gun based on Lorath rail-weapon technology.

Nano-Femto Constructor

A paint-sprayer like tool which utilizes a reservoir of tiny remotely controlled and instructed constructor machines to build components or fuse parts together.

Magnetic Rail Hammer

A magnetic-rail driven metallic cylinder which can be utilized as a high-intensity impact hammer.

'The Twister'

'The Twister', is a super high performance drill and wrench system which utilizes high power magnetic motors to deliver immense horsepower and torque to a given operation. Each 'Twister' unit comes with a drilling bit set, self-adjusting socket set, and sander discs.

Cutter Shears

A powered set of double edged cutting shears which utilize diamond edged blades. These shears do not allow for the cutting of super-strong armor and construction materials, however, they do allow for the rapid cutting of wood, stone, and other natural materials.

Grinder / Circular Cutter

A powered disc cutter/grinder which utilizes durandium grains to cause an abrasive effect at a contact point, thus grinding through objects to create a cut. Wider discs for the unit can be utilized as a grinder to wear down edges.

Blower Unit

The Blower Unit is a turbine motor device which can be utilized to create directed wind gusts. Blower units also can be fitted with heating or cooling units to allow for the temperature of blown air to be manipulated. Blower units can also be fitted with a feeder system to allow the blower unit to be utilized as a liquid or powder spreading system.

'The Shaker'

'The Shaker' is a high intensity and frequency oscillation unit designed to deliver intense or high frequency vibration to a given area. These units can be utilized to settle concrete or other sediment, stir bodies of water, break ice, or even to test structural integrity of buildings.

DO NOT ABUSE THE SHAKER UNIT

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