

NH-Y-1 Mola-class Exploration Vessel

The NH-Y-1 Mola-class was designed by Noval to traverse dense asteroid fields and post-battle flotsam. Originally conceived for exploration, its role has grown to include search and rescue and deep space mining.

It features a number of strategically placed thrusters at the end of its 'wings' to improve maneuverability. Its compact length and width make navigating these challenging areas considerably simpler and its unique ability to rotate much of its body along its central axis further improves this capability.



About the Ship

The Mola is designed for long voyages across a variety of missions. It is an exploration vessel first and well equipped to handle the various situations that a vessel of its type could encounter. Its equipment is sufficient that it can easily transition into other roles and 'packages' are available to customize it in these directions.



Key Features

As is standard of Noval offerings, the Mola-class has been designed to fit a number of different roles. Each ship features two sets of [powerful mining and construction systems](#). This makes it ideal for both mining operations and rescue operations. Its onboard sensor array supports both of these roles exceptionally well, but also allow it to perform planetary and system surveys. The Mola-class is even capable of cargo hauling, though not in a dedicated capacity.

The ship's most defining features are its massive forward bridge dome made of [Transparent Durandium](#) and a vertical orientation.



Mission Specialization

- Exploration
- Search and Rescue
- Mining
- Yachting

Appearance

The Mola-class features a vertical orientation and a prominent forward dome that contains its bridge. The bridge and rear coupling system are able to remain in a fixed orientation while the rest of the body pivots around its central axis. On each of the major wing sections, a mining-and-gathering system is installed in front of a large hangar bay. On each of the minor wing sections, a powerful flood light and [point-defense turret](#) is placed in front of a smaller hangar bay. Multiple thrusters are arranged across the ship's 'wings'.



History and Background

While [Noval](#) had built a number of custom yachts and exploration vessels in the past, it had never designed one for wide-scale production. When the time came to identify a new home base location, the corporation's continued use of non-Noval vessels served to drive home the gap in their product offerings.

Noval R&D set out to design a vessel that would be comfortable for long missions and well-suited to the variety of situations that an exploration vessel might encounter. The design team worked closely with those involved in picking a location for their new starbase, collecting feedback on the different vessels they used and the challenges they faced along the way. Feedback was also collected from the civilian sector and a number of iterations were explored in mock-up form.

The work that followed sought to create a vessel that wasn't just a “home away from home”, but a place that crew would actively want to return to. Design choices such as the ship's large forward dome and configurable interior were key elements in this approach.

A number of research spikes were conducted to understand the wide range of work that an exploration vessel was expected to perform. Scientific journals were poured over, researchers were interviewed, and even popular media was referenced. The design team realized that in order to adequately solve for all of the identified needs in a satisfactory way, the Mola-class' would have to be designed to fill a number of roles simultaneously.

It was this decision that led the team to the unusual vertical-orientation that the ship would be known for. The placement of its boosters greatly improves its maneuverability, while still allowing for cargo to be attached in the location usually reserved for a larger engine cluster. The ship's unusual rotation system was also decided upon at this point, further increasing the vessel's maneuverability inside of dense asteroid or flotsam fields. It was this time that Alek Hartan commented that the ship looked much like a sunfish. The description stuck and soon the name “Mola” became the craft's working title.

Statistics and Performance

The Mola is a surprisingly agile vessel. Its distributed thrusters allow it to easily pivot around its center of mass and provide additional power on top of its base drive system.

Designed for long missions with minimal support, the Mola is extremely reliable and easy to maintain, despite its luxury trappings.



General

- Class: NH-Y-1
- Type: Multi-purpose Exploration Vessel
- Designers: [Noval Defense, Space, and Security](#)
- Manufacturer: [Noval Heavy Industries](#)
- Fielded by: [Noval Heavy Industries](#), Independent
- Price: 420,000 [DS](#) (105,000 KS) for all mission configurations.
 - A NH-Y-1L luxury variant is available for 512,000 [DS](#) (130,000 KS) that further improves the quality of the vessel's interior.

Passengers

Crew: 7 operators are recommended, 3 are required.

Maximum Capacity: There are accommodations for 16 people. About 32 people can fit aboard in an emergency, but the ship would feel extremely cramped unless the Mola was configured to support that many passengers.

Dimensions

- Length: 90 meters
- Width: 48 meters
 - Central Body (Crew Quarters, Compartments, Central Transit Corridor): 32.5 meters
 - Central Body, Egress Bays, Pectoral Wings: 48 meters
- Height: 160 meters
 - Central Body (Crew Quarters, Compartments, Central Transit Corridor): 32.5 meters
 - Central Body, Mining, and Vessel Bays: 65 meters
 - Central Body, Mining, Vessel Bays, and Dorsal/Ventral Wings: 160 meters
- Decks:
 - 3 Decks, Radially (4.5 meters each)
 - 1 Central Transit Corridor (6 meters)

Propulsion and Range

- Hyperspace Fold Drive: .50 ly/m
- Sublight Engines: .30c
- Range: 2 years with normal crew
- Lifespan: 50+ years with normal maintenance

- Refit Cycle: 5 years



Damage Capacity

- Tier: 11, ([Light Starship](#))

Inside the Ship

Deck Layout

The Mola has a novel deck layout hearkening back to the days before gravity control systems were common. All areas except for the primary drive system and bridge rotate around a central corridor that is free of gravity. The ships decks encircle this central corridor.

Movement within a single deck is simple. Crew can begin walking along a radial hallway and eventually return back to their starting point. To move from one deck to the next, or into the central corridor, reduced gravity ladder access is available. These access shafts also have equipment for transferring goods between decks, up to and including large medical equipment.

Each deck along the central body features a non-fixed room layout. Abundant utility panels within the walls, floor, and ceiling allow any area to be used for any purpose. Walls can be moved laterally and locked into a new position at any time. These adjustable walls are capable of maintaining air-tight, sound-proof seals between each compartment. Unlocking a wall is as simple as releasing three latches on either side of the wall. Once released, the walls can be easily moved by two people along a series of tracks that are concealed when not in use.

This means that each ship's deck layout is fully customized for the ship's purpose and owner. A medical-focused Mola might have extensive rooms for triage, surgery, and so forth, while a yacht-focused Mola might have expansive lounges, recreational spaces, and bedrooms. Switching from one purpose to the other could potentially be done mid-mission, though the logistics of replacing all of the furniture and equipment would likely prohibit such an extensive change.

All walls and doors are built to a level of durability equivalent to a blast door. In the event of an unexpected decompression or boarding, all doors and access ways automatically close as soon as they detect that no crew would be injured in the process. Crew with appropriate authorization can bypass the automatic locks. When atmosphere is restored or a commanding officer issues the all-clear, normal function will be resumed.

Compartment Layouts

The Mola's interior is extremely customizable, able to adjust not only for a wide range of mission types,

but also its owner's personal tastes.

Bridge

The Mola's bridge provides an unparalleled view of the space surrounding the ship. The [Transparent Durandium](#) dome can be made opaque in an instant, functioning as a massive piece of 'smart glass'. This provides the crew protection against visual spectrum weaponry that may not be stopped by the Durandium alone.

Holographic projections can fill the entire chamber to allow captain and crew to discuss routes, identify interesting objects, and review data.

Central Corridor

The central corridor is six meters from side-to-side and cylinder shaped. The ship's artificial gravity does not effect this corridor to simplify movement while the main body of the ship rotates around the corridor. Entrance to the bridge and engineering is via a single round entry point that gradually increases gravity to normal. Multiple deck access points are along its length.

The central corridor can be outfitted for hydroponics, recreation, or utility purposes, if desired.

Engineering

The Mola's primary engineering space is located to the aft of the ship. It's here that the ship's reactors, drive system, tow system, fold drive, and more are contained. Access to each system is easy and designed with maintenance in mind. Panels on the exterior of the ship can also be opened to reveal components that would not be easily accessible from within.

Pectoral Egress Bays

Located on either side of the Mola, the ship's two pectoral egress bays each feature two quick-exit hatches designed for individuals, with or without power armor. The interior of the bay features a small, vertically mirrored armory, with support for six suits of power armor per bay.

While the bays can be used for offensive purposes, their primary purpose is to allow specialists easy access into space for search and rescue, maintenance, and mining operations.

Additionally, the forward egress bays can be opened remotely to allow the Mola to fire off sensor drones such as the ["Whisker" Sensor Drone](#) that come standard with the ship.

Dorsal/Ventral Mining and Vessel Bays

The forward half of the ship's prominent dorsal and ventral sections are dedicated to the [Multitool](#) mining system and its storage compartments. The Mola features two such Multitools, giving it excellent mining and repair capabilities.

The rear half of the sections are able to house two mechs or small craft. The side panels can open to allow simple, direct access into space or atmosphere.

Deck Compartment Configurations

The Mola's deck area is 57 meters long and supports twelve 'rows' of deck compartments. The first deck level holds two compartments, the second deck level holds four compartments, and the third deck level holds six compartments.

Each row is 4.5 meters wide and up to 57 meters in length. Air-tight, sound-proof dividers can separate these rows into any number of compartment configurations. Each row is separated by a generous hallway with all the transit and safety features one would expect of a Noval product. Two additional hallways encircle each deck level for easy access between rows.

Unless otherwise indicated, a full ship's worth of compartments are included in the Mola's price, regardless of configuration.

All compartments are built to a high degree of quality. Top-of-the-line electronics and materials are used in all capacities. Design touches - bold, subtle, functional, and/or aesthetic - are present in every centimeter of the vessel's interior.

The following is a sample of Noval's default compartments.

Deck Compartment - Armory Configuration

The Armory configuration, typically located adjacent to the pectoral egress bays, outfits a compartment with biometric gun casing, maintenance equipment for weapons and power armor, and adequate storage space for a normal ship's defense/boarding crews.

Many customers opt to add a small gym package to this compartment for physical fitness and recreation purposes. It is recommended to increase the compartment's size by 5 meters to accommodate the additional equipment, but not necessary.

Length: 10-15 Meters

Deck Compartment - Captain's Quarters Configuration

A spacious room with a number of luxury touches. One of the most heavily customized rooms on any Mola, the Captain's Quarters tends to be unique to the ship's captain.

Some frequently chosen options include:

- Carpet
- Fish Tank
- Over-sized Bed
- Small Hydroponics Farm
- Teleconferencing Support, including holographic projectors and tactile feedback
- Trophy/Model Cases

Length: 7 Meters

Deck Compartment - Crew Cabin Configuration

Crew cabins are available in single, bunk, double, and double bunk configurations. Each cabin includes a small private bathroom, adequate closet space for its occupants, and simple recreational comforts.

A portion of the foot of each bed can be raised to reveal a built-in display. A combination of targeted circumaural speakers and noise-cancelling technology means that crew can listen to their favorite shows and music without using headphones - or being heard by their cabin mates.

If desired, desk space can also be added to each cabin. This comes in two options.

The first is a sleek, wall-mounted piece of furniture that is unobtrusive when not in use. Pulling on the furniture's handle causes a desk and swivel-chair to slide away from the wall.

The second option is a traditional desk setup, with a mounted free-standing desk and accompanying chair. This takes up more space, so it is recommended to extend the crew cabin to accommodate.

Length:

- Single Occupant: 3 Meters
- Two Occupant, Bunk: 3.5 Meters
- Two Occupant, Individual Beds: 7 Meters
- Four Occupant, Bunk Bed: 7 Meters

Please add 1.5 meters for every two free-standing desks desired.

Deck Compartment - Galley Configuration

The Mola's galley compartment has more in common with a high-end restaurant kitchen than a normal ship's galley. Featuring a large walk-in refrigerator and top-of-the-line appliances, the Mola's galley is able to support a personal chef or ship's cook for the duration of any mission the vessel might undertake.

A dining area is standard as part of the compartment, with spacious seating for the normal crew compliment.

Length: 20 Meters

Deck Compartment - Hydroponics Bay Configuration

An extensive indoor gardening area, the Hydroponics Bay features rows of irrigated, nutrient-rich containers and beds for growing plants. By default, each side of the compartment features four 'stacked' rows of these hydroponic containers. Water level, lighting, nutrient content, and more are managed on a container-by-container basis from a simple control panel located at the front.

A fabricator present at one end of the bay can create a variety of plant-based 'meats' that have a look, taste, and texture similar to that of the target meat.

A well-stocked and well-supplied hydroponics bay can provide sufficient greenery for the standard crew compliment for the duration of a mission.

Length: 20 Meters

Deck Compartment - Medical Configuration

The standard Medical compartment includes a triage station with full surgical equipment and two recovery rooms within the primary compartment.

All entrances to the compartment are upfitted with a powerful air barrier system, active whenever the door is open, prevents airborne contaminants from entering (or exiting) the compartment. Likewise, advanced sterilization devices are located around each door, easily sterilizing a healthy visitor's skin and clothing.

A dedicated medical vessel will have a number of special needs - this default compartment is designed for a standard, non-dedicated medical vessel. In the case of a medically-specialized Mola, each medical compartment would be more highly specialized for a specific role, such as surgery, physical therapy, maternity wards, and so forth.

Length: 12 Meters

Deck Compartment - Recreation Configuration

The Recreation Room configuration is a highly-advanced VR simulator. Feedback for all senses comes standard, allowing the crew to fully immerse themselves in whatever scenario they are interested in. Additionally, a specialized floor and gravity manipulation system is installed, creating a room that can replicate the endless expanse of space, the depths of the ocean, or a simple urban street corner.

For a crew venturing forth on long missions, we highly recommend at least one of these compartments.

Length: 15 Meters

Deck Compartment - Storage Configuration

The Storage Configuration includes a number of track-mounted cargo movers along the walls and floor. It ties into the ship's mining system and greatly expands the ship's capacity for hauling minerals and other goods. Loading/unloading of mined resources is handled automatically, but cargo can be manually delivered to the room for storage as well.

Length: 57 Meters

Ship Systems

Armored Hull and Hull Integrated Systems

The majority of the ship is constructed from [Madite-S](#), a variation of Noval's proprietary advanced plastic. It is light-weight, easy to produce, and incredibly durable. The '-S' variant is self-healing to a degree, giving the Mola excellent defense against stray asteroid chunks, vessel debris, and other hazards that the Mola might encounter during its normal duties.

Computers and Electronics

An advanced electronics package is standard on all Mola. This includes sensors, navigation, and more. An NDC [Autonomous Mech AI "EVE"](#) is the default ship AI, however an AI system of the purchaser's preference can be easily used instead.

Noval can install additional equipment upon request, such as ECM or stealth systems.

Emergency Systems

The Mola is equipped to handle all of the most common incidents that a spaceship could be expected to encounter. Fire suppression systems, anti-boarding measures, decompression prevention, and more are part of the Mola's standard offering.

All corridors, hallways, and compartments contain a set of simple atmosphere suits that can be equipped in an emergency. The suits can support an individual for up to four hours of normal activity. The onboard rebreather further extends the amount of time that the suit can provide breathable air, but at a noticeably reduced oxygen level after the first four hours.

Life Support Systems

The Mola is designed for long missions with little external support. As such, its life support systems are over-sized and easily capable of supporting a breathable atmosphere and clean water for double the standard crew compliment for the entire duration of a mission. If a Mola features a Hydroponics Bay, any excess nutrients from the filtration process are redirected to this compartment to further recycle available resources.

Temperature control is managed on a per-compartment basis. In addition to power and water, the ceiling utility panels feature vents into the ship's heating and cooling system. Cold air is piped through the ship's engineering compartment where it is heated to a safe level before being cycled through the ship. On its return path, the air is cycled through a system of space-oriented heat radiators that rapidly cool the air. Each temperature of air is then run in separate pipes through each of the compartment's utility panels in insulated pipes. How much of either temperature air is provided is carefully managed by the utility panel itself.

Propulsion

Primary STL propulsion is provided by a gravity manipulation drive. Additionally, eighteen thrusters are arranged around the body and ship's 'wings', providing greatly increased maneuverability.

FTL is provided by a top-spec [hyperspace fold drive](#) that has been calibrated for moving a ship of the Mola's size and its standard cargo/towing load. The additional capacity somewhat reduces the Mola's top travel speed.

For docking purposes, the Mola's dorsal and ventral wings can be retracted in a telescoping fashion to significantly reduce the height profile of the vessel. During this time, the thrusters on these wings are deactivated.

Towing

The rear-most section of the Mola features a gravitic coupling system that can tow cargo or recovered vessels. In a mining configuration, resources can be funneled directly into cargo containers to greatly increase the Mola's cargo capacity.



Shield Systems

The Mola is protected by a combination of [gravitic and electromagnetic shields](#). In both cases, the shields have been strengthened to handle harsh environmental hazards, though their ability to resist combat damage remains unchanged.

In circumstances where it is useful, the gravitic shield can switch to a non-conformal mode to brush aside asteroids and debris before it gets too close to the vessel. This is largely an automatic process and is designed to not interfere with normal craft operations.

The electromagnetic shield system has been enhanced for additional protection from solar activity and reactor leaks from derelict vessels.

Weapons Systems

The Mola is many things, but a combat vessel it is not. It features only two weapon systems for point defense purposes.

The ship's two [S6-TLAC "Cavalry"](#) are controlled by the ship's onboard system by default and used to deal with minor navigational threats to the ship. Manual control is possible, but not recommended.

In the event of an attack, the autocannons are capable of providing a reasonable level of defense, though Noval recommends an escort if entering dangerous territory.

- 2x [S6-TLAC "Cavalry"](#), DR 7

Other Systems

- 2x [MultiStruct Multitool](#) (Large)
- 2x Sensor Drone Launcher
 - 4x ["Whisker" Sensor Drone](#) are included with the Mola at time of sale

Vehicle Complement

The Mola's two vessel bays can hold up to four mecha, fighters, small shuttles, or small exploration craft.

OOC Notes

[Whisper](#) created this article on 2020/01/14 21:19.

[Approval Thread](#)

Products & Items Database	
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