



CAN YOU FIND...

1. ICEBREAKING BOW

Nuyina is a Polar Class 3 Icebreaker. Capable of breaking 1.65m of ice at 3 knots continuously. The special bow design is key to *Nuyina*'s ability to efficiently move through ice.



2. HYBRID DRIVE, AED

Nuyina's propulsion system is a hybrid diesel electric design. The key components of the hybrid drive are the advanced electric drives, generators and the 16 cyl diesel main engines. The combined power of *Nuyina* is 26,600kW.



3. CARGO HOLD

Nuyina will be able to carry more than 1200 tonnes of dry cargo. This includes containerised and unusually shaped cargo, Antarctic machinery, spare parts and food.



4. THE CAPTAIN

Nuyina will accommodate 32 crew including the Captain as well as 117 Antarctic expeditioners for more than 90 days at sea.



5. MAIN CARGO CRANES

Nuyina has 2 main cargo cranes, capable of lifting 55 tonnes each. The cranes will move all the cargo in and out of the holds, including containers, Haggglunds and bulldozers.



6. LANDING BARGES

The primary method to transport cargo from *Nuyina* to Antarctic research stations is by landing barge. The barges can carry more than 45 tonnes and reach speeds exceeding 8 knots.



7. MINI NUYINA

There is a mini LEGO *Nuyina* model IN the *Nuyina* LEGO model!



8. HELICOPTERS

Nuyina can stow 4 light helicopters or 2 medium helicopters in its hangar. Helicopters can land on the aft helideck, as well as lift cargo on a cable from the bow.



9. CARGO FUEL TANKS

As well as dry cargo, *Nuyina* will deliver liquid fuel as cargo to Antarctic research stations. The liquid cargo fuel tanks will hold more than 1.9 million litres of Special Antarctic Blend- Diesel fuel oil.



10. MEDICAL FACILITY

Because *Nuyina* operates so far from Australia, a medical facility has been included in the design. The medical facility includes two ward areas, an operating room, an office and a full range of medical equipment.





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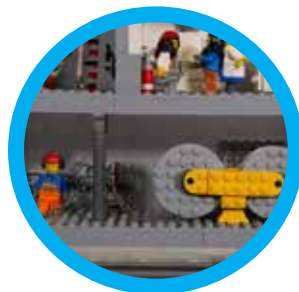
1. SCIENCE LABORATORIES

Nuyina is a resupply and scientific research vessel. As well as scientific laboratories *Nuyina* has other scientific equipment including a moon pool, drop-keels, multi-beam bathymetric and scientific echo sounders, fisheries sonar systems, hydrophones and underwater cameras.



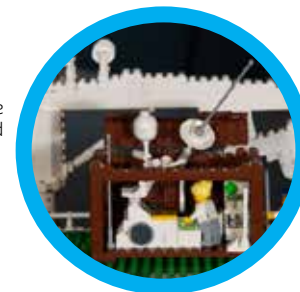
2. WINCH ROOM

Winch and cable systems enable deployment of scientific equipment, including net systems, real time video packages, corers and grabs to sample the Southern Ocean and sea floor.



3. METEOROLOGICAL INSTRUMENTS

Meteorological measurements support forecasting and climate services such as those provided by the Bureau of Meteorology.



4. TRAWL NET

Nets are used to catch fish and krill for scientific research.



5. REMOTELY OPERATED VEHICLE

ROVs fitted with cameras and instruments for taking measurements and samples can be deployed through the moon pool.



6. EXPEDITIONERS

Nuyina can carry 117 scientists and expeditioners and 32 crew for up to 90 days.



7. AQUARIUM

On-board aquariums can be used to hold and study fragile lifeforms such as fish, jellyfish, krill and salps.



8. MOON POOL

The moon pool will be used for deploying equipment like ROVs, nets and instruments to measure water conductivity, temperature and depth.



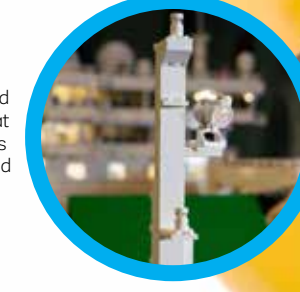
9. CONTAINERISED LABS

Some science projects will use specially equipped shipping containers. *Nuyina* can carry 96 containers of which 22 can be serviced laboratories and support containers.



10. AIR SAMPLING MAST

Air samples are collected and analysed by instruments that measure gases and particles including aerosols, ozone and greenhouse gases.





For more information about RSV *Nuyina* visit

antarctica.gov.au/icebreaker

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