



Polar Class (PC3) Heavy Transport Vessels

AUDAX / PUGNAX



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RED BOX ENERGY SERVICES is the leading provider of module transportation services for Arctic LNG Liquefaction Projects. The Polar Class (PC3) Heavy Transport Sister Ships, **AUDAX** and **PUGNAX** are the only vessels in the world today that can navigate unescorted, year-round above the Arctic Circle. They have been designed and constructed to safely transport module cargoes weighing as much as 20,000 tonnes.

The Vessels have an ice-free deck area capable of receiving both side and stern loadout and discharge of modules as long as 80 meters with a beam of 45 meters. After delivery from GSI Shipyard in Guangzhou China in 2016 they have executed 32 voyages via the Northern Sea Route navigating over 30.000 nautical miles through ice covered seas above the Arctic Circle.

General

Name	AUDAX	PUGNAX
Call sign	RJAP	RJBB
IMO	9763837	9763849
Class Notation	+1A1, General Cargo Carrier, BIS BWM(T) CLEAN DK(+) E0 NAUT(AW) PC(3) TMON	
Compliance with	RMRS ARC-7 Ice strength	
Class Society	DNV-GL	
Year Delivered	2016	
Flag	Curacao	
Port of registration	Willemstad	

Principal particulars

Length o.a.	206.3 meters
Length p.p.	193.8 meters
Breadth Moulded	43.00 meters
Breadth o.a. (main deck)	43.00 meters
Depth	13.5 meters
Designated draught	7.5 meters
Draught scantling	8.00 meters
Ice scantling draught	8.00 meters
Max ballasting draught harbour conditions	12.00 meters
Deadweight	24,500 tonnes
Gross tonnage	34,146 tonnes
Net tonnage	10,244 tonnes
Deck cargo (at design water line)	21.800 tonnes
Cargo deck area	174 m x 43 m
Deck load	25 tonnes/m ²

Speed and Endurance

Service speed open water	13 knots
Maximum speed open water	17 knots
Speed with icebreaking level of 1,5 meters at design draught	2 knots
Endurance	13,000 nm

Power Supply

Main Engines	2 x Wärtsilä 16V32 8,880 kW/ 720 rpm
	2 x Wärtsilä 12V32 6,600 kW/ 720 rpm
Main Generators	2 x 7000 kVA 2 x 9400 kVA
Emergency/harbor generator	1 x 970 kVA (440V)

Propulsion

2 fixed pitch propellers with 4 blades diameter of 5,4 meters, stainless steel. Strengthened according Ice Class requirements. Driven by two electric motors of 12,000 kW each.

Thrusters

One transversal bow tunnel thruster (1000 kW) with a propeller diameter of 2000 mm. Controllable pitch type.

Ballast System

Ballast Water Capacity	65,000 m ³
Ballast Pump/Type	6 centrifugal pumps
Ballast Water Treatment	2500 m ³ /h @ 3 bar each 2 x 2500 m ³ /h

Equipment

Crane	1 service crane (SB side) 10 ton
Mooring Winches	2 combined anchor/mooring winches 6 SSCD mooring winches 1 double drum mooring winch

Tank Capacity

Fuel Oil	3,800 m ³
Fresh Water	440 m ³
Lubricating Oil	60 m ³
Boiler Water	40 m ³
Treated waste water	350 m ³

Navigational Equipment

GPS	2 x DGPS / GLONASS
Radars	1 x 25kW X-band 1 x 30kW S-band 2 x ARPA displays
Autopilot	YES
Gyro Compass	2 x Gyro
ECDIS	3 X Independent ECDIS
Echo Sounder	One navigation echo sounder (dual frequency). Depth measuring range 0/500 m.
Speed / Distance Log	One dual axis Doppler type speed log
Wind Speed/ Direction	1 x Wind sensor
Onboard Motion Monitoring	OCTOPUS-Onboard
Weather Forecast	Weather Facsimile

External Communication Equipment

GMDSS A1/A2/A3/A4
2x VHF DSC
2x MF/HF DSC with radio telex
1x Inmarsat C
1x Radio Direction Finder
Iridium
FBB 500
VSAT
Aerial VHF
LRIT
SART/EPIRB

Winterization

The vessel is fully winterized up to -50 °C
Cargo operations winterized up to -40 °C

Accommodation

26 Crew + 5 Passenger
Total of 31 (single) cabins



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deck area: 174 x 43 meters

