

NEPTUNE NAIAD

65m Multipurpose Seismic Survey Vessel



MULTIPURPOSE

Modern, 65m seismic survey vessel, capable of operating in towed streamer, single / dual / triple seismic source, or for retrieval and deployment of ocean bottom nodes.

RELIABLE

Dry docked in 2017, all major machinery underwent refurbishment ensuring the Naiad is well prepared to deliver exceptional reliability throughout any project.

HIGH CAPACITY

In addition to the dry dock, substantial upgrades were performed on the seismic spread. Source capacity was increased, umbilicals replaced or refurbished, source controllers upgraded and expanded to 80 gun capacity and all safety critical systems tested and certified.

EFFICIENT

The fuel efficient, distributed compressor configuration deliver a minimum of 3850 cubic inches or greater of air at 2000 psi in any environment.

CLOSE PASS

While not DP rated, the Naiad has Close Pass Certification witnessed and certified by class.

STREAMER READY

The Naiad is fully configured with handling equipment ready to accommodate up to four towed streamers.

Particulars are believed to be correct but are not guaranteed.

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SPECIFICATIONS AT A GLANCE

- FEMA Close Pass Certified
- Variable pitch propeller
- Approximately 60 days at sea endurance
- 66.8m (LOA) x 15m (beam), 5.2 – 6.2m draft
- Sikorsky S-76 rated helideck
- 43-person accommodation with en-suite, plus hospital
- Large instrument room with attached environment controlled computer room
- Large processing room with attached environment controlled computer room
- 6 active strings configured, Barco C-680 x range diverters
- 80-Channel Seemap Gunlink2000 source controller
- Teledyne SSMS air management system
- BouyLink 4DX, latest version RGPS tracking system (2 per string plus diverters tracked and spares)
- Canyon umbilical and sensor test panels
- Fuel efficient
- 4 streamer ready (ODIM winches installed)

Vessel Flag and Class

Vessel Type	Seismic Research Vessel
Vessel Name	Neptune Naiad
Flag	NIS
Year Built	2002 (keel laid in 1999m completed in 2001, delivered in 2002)
Year Converted	2008
Class	Lloyds Register, 100 A1, Seismic Research Vessel, Ice Class 1D, +LMC

Vessel Main Details

Length	66.8m (oa) 63.07 (bp)
Breadth	15m max
Draft	5.2 (light draft)
GRT	2705 tons
NRT	811 tons
Deadweight	1005 tons @ 5.2m

Capacities and Capabilities

Fuel capacity	709.5 cu.m
Speed	12 knots max, 10.5 cruising
Fresh water capacity	159.2m ³
RO Plant	CITOR 17 ton per day (new in 2017)
Fuel consumption, voyage	9 tons per day cruising
Fuel consumption, survey	13–14 tons per day based on 24-hour operations
Continuous bollard pull	39.2 tons
Continuous bollard pull w/ Azimuthal thruster	44.5 tons

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Machinery

Main engine make/type/model/ numbers	Man B&W Alpha L6-27 / 38
Main engine power	2774 BHP at 800 rev / min
Propulsion, make/type/numbers	1 x 4 blade cp dia 3.1m
Rudder	Schilling high lift
Bow thruster (Fwd), make/type/power	HRP 250 kW
Azimuth thruster make/type/ power, if any	Rolls Royce TCNS73, 1000 kW
Main aux generator make/type/number	1 x Shaft generator, Leroy 1040 kW
Main aux generator power/voltage/ frequency	1 x Caterpillar 3508B 800 kW
Compressor generators make/type/number	2 x Mitsubishi 1000 kW compressor power primary role)
Emergency generator power/voltage/ frequency	1 x Mitsubishi 1400 kW (Azimuthal thruster and compressor power primary role)

Cranes and Deck Equipment

Deck crane	1 x Triplex 6 ton @ 12.8m Knuckle jib
Deck crane	1 x Stromme 2 ton @ 10m foldable

Life-Saving and HSE

FRC	MP Seabear 23 Mk II (new in 2013)
Life Rafts	6 x 25 man
Survival Suits	45
Surveillance	Close circuit deck camera monitoring of all seismic decks with remote displays in PM office, instrument room and bridge

Accommodation and Offices

Number of berths	43
Number of single berth / room	9
Number of 2-men rooms	17
All rooms have en-suite facilities	
VSAT	1Mb / Sec
Instrument room	38m2 dedicated to Navigation, Source Control and Observers complete with desktop computers and bridge communications. Attached 15m2 environment controlled computer room with 7 x 19"racks
Processing room/Client office	21m2 office space with desks and desktop computers with attached 9.8m2 environment controlled computer room with 5 x 19" racks
Gymnasium	Dedicated, equipped gymnasium
Hospital	Fully equipped hospital with 1 bunk and en-suite shower and toilet
Client office	C/W desktop PC's and communications
PM office	C/W desktop PC's and communications
Gun shack (on gun deck)	C/W Seemap remote station
Gun mechanic workshop	On gun deck
Tape store and tech. workshop	Attached to instrument room

Seismic Source Equipment (Guns and Handling)

Hang points at each run array	Currently 6 per strong, 2 ton rated per point
Volume of each array	Currently configured with a 100BarM, 3080 Cu" 1900LLXT, 6 string dual source array
Type of air gun	Bolt 1900LLXT (active) and 1500LL inventory
Compressor	Greenfield, 4 x GA 250 13 WP (low pressure boosters) plus 5 x C3T212 3GP (high pressure units)
Compressor capacity	Total output 3850 CFM @ 2000 psi. 1, scalable in 770cfm increments

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Seismic Source Equipment (Guns and Handling) cont.

Fisher valve	Systems in place to add 2 NCA 770cfm deck compressors
Umbilical winches	2
Wide tow winches	6 (2 x double, 2 x single) ODIM, 400 capacity @ 80mm cable OD
Diverter	3 x Barco C680

Seismic Source Equipment (Control and QC Electronics)

Source controller	Seamap GunLink 2000, 80-channel capacity (5 x 16 channel), upgraded in 2017
Air management	Teledyne SSMS in water air management system, 12 guns per strong capacity
Test and QC equipment	Veritas/Canyon test panels, 80 gun capacity
HP air deck displays	Large format digital displays for each strong mounted above each gun reel

Seismic Navigation and General Equipment

Gyro	2 x Sperry marine navigat x Mkl
Echo sounder	Kongsberg Simrad type EA600, 12 and 38 Hz
Speed logger	Kongsberg Speed Logger (new in 2017)
Pinger poles	2 x through hull retractable pinger poles for installation of user specific transducers or receivers

Towed Streamer Equipment

Streamer winches	2 x ODIM single with spooling device, capacity 1200m of 65mm OD streamer
Max. streamer tow and handling capacity	1 x 12000m, 2 x 12000m, 3 x 8000m, 4 x 6000m
Spare streamer storage	1 x ODIM single, 3500m capacity of 65mm OD streamer
Lead-in winches	2 x ODIM single, 1000 capacity @ OD 37mm cable
Tow points	4 x ODIM Telescope 18 ton capacity
Tow point fairleads	ODIM / Spectrum 4 x 610 / 45
Side booms	2 x ODIM 12m, 5 ton each with 1 x 5 ton aux winch

Fuel Consumption Estimates

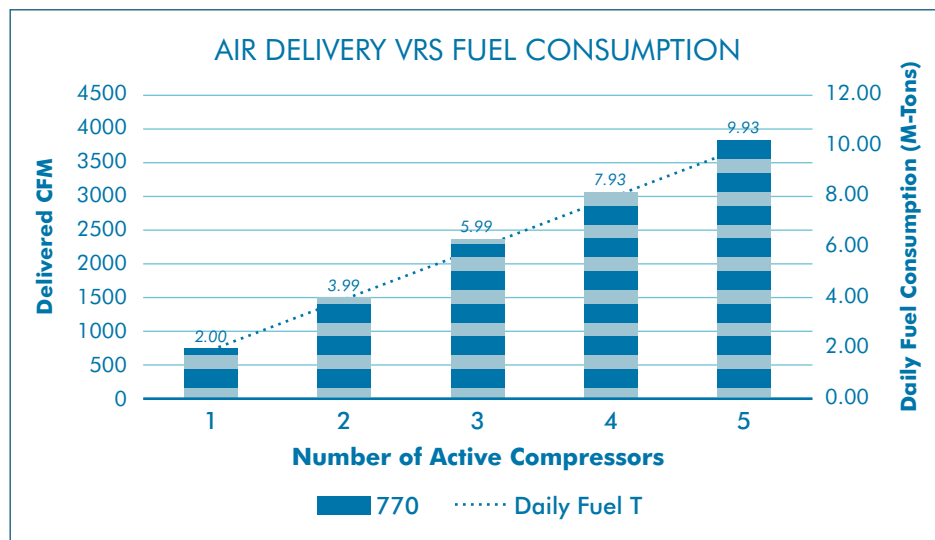


Figure 1: Fuel consumption for compressors only, estimate additional 6 ton per day for ships consumption.

¹ Additional compressors can be added on streamer deck if required in source only operations. Fire system, and rigging on place and certified.