

Naval Vessel Technical Data — Project 21B

Class: Destroyer

Designation: INS Trishul

Displacement: 6,500 tonnes (full load)

Length: 163 meters

Beam: 17.4 meters

Draft: 6.5 meters

Propulsion: Combined Gas and Gas (COGAG)

Engines: 4 × General Electric LM2500 gas turbines

Maximum Speed: 30 knots

Range: 4,500 nautical miles at 18 knots

Crew: 325 including 35 officers

Armament

- 8 × BrahMos Block II Supersonic Cruise Missiles
- 1 × 76 mm Otobreda Super Rapid Gun Mount
- 2 × AK-630 CIWS
- 2 × Twin 533 mm Torpedo Launchers
- Barak-8 Surface-to-Air Missile System (32 vertical launch cells)

Sensors & Radars

- MF-STAR AESA multifunction radar
- HUMSA-NG sonar suite
- ELTA EL/M-2238 STAR surveillance radar
- Electronic Warfare Suite: Shakti ESM/ECM system

Aircraft Facilities

- Hangar and flight deck for 2 helicopters (typically HAL Dhruv or Sea King)
- Full refueling and rearming capabilities for embarked helicopters

Communication & Control

- Integrated Combat Management System (CMS-21)
- Link II tactical data link for fleet coordination
- Satellite communication suite for long-range command operations

Submarine Project — Kilo-Class Refurbishment

Designation: INS Sindhurakshak

Type: Diesel-Electric Attack Submarine

Displacement: 3,100 tonnes (submerged)

Length: 72.6 meters

Beam: 9.9 meters

Speed: 19 knots submerged

Endurance: 45 days

Depth: Operational up to 300 meters

Systems

- 6 × 533 mm torpedo tubes (capable of launching Club-S missiles)
- Sonar: MGK-400EM
- Fire Control: LAMA-EKM suite
- Noise Reduction: Anechoic tile coating
- AIP (Air Independent Propulsion): Not installed

Crew

52 personnel (including 10 officers)

Operational Capabilities

- Both vessels capable of integrated network-centric warfare
 - INS Trishul can track and engage aerial, surface, and submarine threats simultaneously
 - INS Sindhurakshak provides stealth reconnaissance and torpedo attack capability
 - Typical mission endurance:
 - Destroyer: 45 days
 - Submarine: 30–45 days
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Maintenance Notes

- Trishul hull requires drydock inspection every 36 months.
 - Sindhurakshak battery modules require overhaul every 5 years.
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Classification

Level: Confidential — For Naval Research and Testing Only

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