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The NH90 is the most modern and versatile helicopter in its class. It has been designed to replace all the previous generation helicopters in its category.

There are two versions of the NH90, the NH90 NFH (NATO Frigate Helicopter) for naval missions and the NH90 TTH (Tactical Transport Helicopter) for tactical missions. The NH90 is agile, stealth, safe, efficient and powerful.

**A COMMON PLATFORM FOR ALL MISSIONS**

<table>
<thead>
<tr>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 X 2,000 KW FADEC engines</td>
</tr>
<tr>
<td>Glass cockpit</td>
</tr>
<tr>
<td>Integrated mission system</td>
</tr>
<tr>
<td>Fly-by-wire flight controls</td>
</tr>
<tr>
<td>Full composite airframe</td>
</tr>
<tr>
<td>Full composite damage tolerant rotor blades</td>
</tr>
<tr>
<td>Fully de-iced</td>
</tr>
<tr>
<td>NATO interoperable</td>
</tr>
</tbody>
</table>
The NH90 is designed according to the concept of one NH90 per frigate capable of any naval mission.

**NFH MISSIONS**

- ASW
- ASuW
- Search And Rescue (SAR)
- Maritime surveillance
- Limited AEW
- Anti piracy and counter terrorism
- Intelligence gathering
- Exclusive economic zone surveillance and control
- Delivery/recovery of boarding party
- MEDEVAC/CASEVAC
- Assistance to disabled ship
- Fight against pollution
- Vertical replenishment

**TTH MISSIONS**

- Tactical troop transport
- Logistics and utility
- Special operations
- Disaster relief
- Casualty evacuation (CASEVAC)
- Medical evacuation (MEDEVAC)
- Search And Rescue (SAR)
- Combat Search And Rescue (CSAR)
- Counter terrorism
- Airborne command post
- Parachuting
- VIP transport
Main features of the NH90 NFH:

- ESM suite
- E/O sensor linked with radar
- 360 degrees radar with ISAR mode
- Link 11
- Dipping sonar
- Sonobuoys
- 1 or 2 mission consoles
- Self-protection suite
- IFF interrogator
- Digital map generator
- 2 Marte missiles (MK2/5 or MK2 ER)
- 2 torpedoes (MU90, MK46, Stingray)
- Mixed configuration (1xTorpedo + 1xMissile)

Main features of the NH90 TTH:

- Full glass cockpit
- 2 x 2,000 KW engines for power reserve anytime
- State-of-the-art communication and navigation suite
- Piloting FLIR for high speed tactical flight
- HMDS (Helmet Mounted Sight Display)
- Up to 20 crashworthy foldable troops seats
- Self-protection suite
- Weather radar
- 5 hours endurance
- Pintle machine guns and gunpods
- Rear ramp
- Easily reconfigurable cabin with a wide choice of equipments
- 2 large sliding doors

The NH90 NFH main features:

- ESM suite
- E/O sensor linked with radar
- 360 degrees radar with ISAR mode
- Link 11
- Dipping sonar
- Sonobuoys
- 1 or 2 mission consoles
- Self-protection suite

The NH90 NFH crew concept:

The NH90 NFH is a flexible system able to accommodate a crew of 3 or 4 people concept:

- 1 pilot and TACCO in cockpit and SENSO in cabin
- 2 pilots in cockpit and TACCO + SENSO in cabin.

Besides, while performing an ASW or ASuW mission, the NH90 wide cabin, of up to 6 troops seats, can still accommodate a boarding party.
The NH90 is designed to be operational anytime anywhere. It can be easily deployed:

- Aero transportable
- Folding system for transport (blades and tail)
- Amphibious capability
- 5 hours endurance for self-deployment
- External fuel tanks
- APU (Auxiliary Power Unit)
- Sand filters
- Electromagnetic compatibility
- Operational between -40 degrees to +50 degrees
- Fully de-iced for flight in known continuous icing conditions
- Environmental control system (air conditioning)
- High performance FADEC equipped engines
- Easy to maintain from unprepared sites
- Operational from sea level to 20,000 ft
- NATO interoperable
### NH90 ONE PLATFORM, TWO MISSION SYSTEMS

- Composite airframe
- Dynamic components
- Engines
- Avionics
- Fly-by-wire controls

**A WIDE CHOICE OF COMPONENTS AND equipments**

### NH90 MAIN MISSION EQUIPMENTS

<table>
<thead>
<tr>
<th>TTH</th>
<th>EQUIPMENTS</th>
<th>NFH</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Infrared Suppressor</td>
<td>N/A</td>
</tr>
<tr>
<td>B</td>
<td>Self Sealing Supply Tanks</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>Steerable Nose LG</td>
<td>B</td>
</tr>
<tr>
<td>N/A</td>
<td>Automatic Blade Folding</td>
<td>B</td>
</tr>
<tr>
<td>B</td>
<td>Manual Blade Folding</td>
<td>N/A</td>
</tr>
<tr>
<td>B</td>
<td>Rear Ramp</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Emergency Floatation System</td>
<td>B</td>
</tr>
<tr>
<td>N/A</td>
<td>TACAN</td>
<td>B</td>
</tr>
<tr>
<td>Op</td>
<td>Satcom</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Cargo Hook</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Rescue Hoist</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Cargo Winch</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>HIMS</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Electro Optical System</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Internal Auxiliary Fuel Tank</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>External Auxiliary Fuel tanks</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Hover In Flight Refuelling</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Mission Recorder</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>VFR</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Ice Protection System</td>
<td>Op</td>
</tr>
<tr>
<td>Op</td>
<td>Weather radar</td>
<td>N/A</td>
</tr>
<tr>
<td>Op</td>
<td>Piloting FLIR</td>
<td>N/A</td>
</tr>
<tr>
<td>Op</td>
<td>Electronic Warfare System</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>Tactical Radar</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>IFF interrogator</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Electronic Support Measures</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Deck Lock Device and Traverting System</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Dipping sonar</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Sonobuoys</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Torpedoes</td>
<td>Op</td>
</tr>
<tr>
<td>N/A</td>
<td>Anti-Ship Missiles</td>
<td>Op</td>
</tr>
</tbody>
</table>

B: Basic  
Op: Optional  
N/A: Not Applicable
NEW TECHNOLOGIES

- Dual channel FADEC engines
- Glass cockpit
- 4 axis autopilot
- Self-protection suite with laser warning receiver, radar warning sensor and E/O sensor.
- HUMS (Health and Usage Monitoring System) and MDS (Monitoring and Diagnostics System)
- Automatic blade and tail folding (electrically powered)
- Fully integrated mission system with digital busses

The full composite airframe of the NH90 has several advantages over conventional airframes:

- Better endurance
- Low radar cross section
- Easy to repair
- Better sensor accuracy
- Increased crashworthiness
• Diamond shape for low radar cross section
• IRS to lower the infrared signature
• Self-protection suite to avoid or counter all the threats
• Retractable landing gear
• High energy absorbing landing gear
• 3D min dry run main gearbox
• High redundancy and segregated routes of Fly-by-wire flight control system
• Dual channel FADEC engines
• Floatation gear
• Damage tolerant design applied to the main components of the helicopter
• Self-sealing fuel tanks
• Armour protection
• Multibox composites blades
• Cable cutter
• Obstacle warning system
• De-icing system
• Sensors to operate in harsh weather and at night
• Energy absorbing seats
• Energy absorbing airframe
**NH90 SPECIFICATIONS**

- **External dimensions**
  - (rotors turning):
    - Length 19.56 m / 64.18 ft
    - Width 16.30 m / 53.48 ft
    - Height 5.31 m / 17.42 ft

- **Weights**
  - Maximum gross weight 10,600 kg / 23,369 lb
  - Alternate gross weight 11,000 kg / 24,250 lb
  - Empty weight 6,400 kg / 14,109 lb
  - Usefull load 4,200 kg / 9,260 lb

- **Cargo capacity**
  - Cargo hook 4,000 kg / 8,818 lb
  - Single or dual rescue hoist 270 kg / 595 lb
  - Rescue hoist on ground 400 kg / 880 lb

- **Fuel capacity**
  - 7 cell internal system 2,035 kg / 4,486 lb
  - Internal auxiliary fuel tanks (each)
    - 400 kg / 882 lb
  - External auxiliary fuel tanks (each)
    - 292 kg / 644 lb or 500 kg / 1,102 lb

- **Internal dimensions**
  - Width 2.00 m / 6.56 ft
  - Length 4.80 m / 15.75 ft
  - Height 1.58 m / 5.18 ft
  - Volume 15.20 m³ / 536.78 ft³

- **Sliding doors opening**
  - 1.60 x 3.50 m / 5.25 x 4.92 ft

- **Rear ramp opening**
  - 1.78 x 1.56 m / 5.84 x 5.18 ft

**NH90 GENERAL PERFORMANCE (BASIC AIRCRAFT)**

- **Maximum cruise speed*** 300 km/h / 162 kts
- **Economical cruise speed*** 260 km/h / 140 kts
- **Maximum rate of climb*** 11.2 m/sec / 2,200 ft/min
- **OEI rate of climb 2 min rating*** 4.3 m/sec / 850 ft/min
- **OEI rate of climb continuous rating at 2,000 m** (6,560 ft)*
  - 2.5 m/sec / 320 ft/min
  - Hover ceiling IGE* 3,200 m / 10,500 ft
  - Hover ceiling OGE* 2,600 m / 8,530 ft
  - Maximum range 982 km / 530 Nm
  - Maximum range with 2,500 kg payload 900 km / 486 NM
  - Maximum endurance 5 h
  - Ferry range (with internal auxiliary fuel tanks) 1,600 km / 864 NM

**NH90 ENGINES POWER RATINGS**

(uninstalled power data-ISA/Sea level)

- **RTM 322–01/9 KW SHP**
  - OEI 30 sec (100%) 2,172–2,913
  - OEI 2 min 1,855–2,488
  - OEI Continuous 1,781–2,388
  - AEO TOP 30 min (x2) 1,781–2,388
  - AEO Continuous (x2) 1,664–2,231
  - GE T700/7TE1*
    - OEI 30 sec (100%) 2,095–2,809
    - OEI 2 min 1,842–2,470
    - OEI 60 min 1,692–2,269
    - AEO TOP 30 min (x2) 1,692–2,269
    - AEO Continuous (x2) 1,577–2,115

* GE engines with Integrated Particle Separator (IPS)
  * at 10,000 kg
“THE BEST OF EUROPEAN INDUSTRY FOR THE BEST AVAILABILITY”

Because our customers’ missions are vital, NHI and its partner companies propose the best support solutions to make sure the NH90 remains available and operational anytime anywhere

1 SUPPORT OFFER PACKAGES:
1. Nose to tail solutions
2. RBH (Repair By the Hour)
3. Parts and maintenance
4. Training
5. Technical publications
6. Technical support

2 ONE INTERFACE TO ADDRESS ALL YOUR NEEDS

Because each customer is special, NHI makes sure that each NH90 end user is in contact with a single partner company responsible for its support requests. This concept of Delegated Partner Company ensures the optimal level of reactivity.

“State-of-the-art technology to simplify the maintenance”

The NH90 has been designed to operate in the most demanding conditions. This includes the capability to be maintained without the backup of a dedicated facility when deployed far from its main operating base.

MAINTAINABILITY FEATURES:

MDS: Monitoring and Diagnostics System
Monitors in flight the main systems of the NH90, these data are easily transferred and processed on the GLIMS.

GLIMS: Ground Logistics Management Information System
This ruggedized laptop informs the maintenance teams regarding the status of the components of the NH90.

GPATE: General Purpose Automatic Test Equipment
Enables first and second line testing of avionic equipments to ensure autonomous operation and maintenance during deployment.

IETP: Integrated Electronic Technical Publications
This electronic documentation provides all the information associated with operating the helicopter and maintaining it.
Because good training is the key to mission success, NHI offers specific and tailored training packages to all NH90 end users.

- **Types of training:**
  - Aircrew
  - Pilot and co-pilot
  - Ground crew:
    - Mechanical
    - Electrical
    - Avionics

- **Primary training locations:**
  - France
    - Airbus Helicopters Training Services
      - Marignane
      - HéliSim
  - Italy
    - Leonardo Helicopters, Sesto Calende
  - Germany
    - Airbus Helicopters Deutschland
      - Donauwörth
  - Finland
    - Patria
      - Halli
  - Spain
    - Airbus Helicopters España
      - Albacete
  - Australia
    - Airbus Group
      - Brisbane

### Training Media
- **Traditional classroom:** Course introductions are conducted with a lecturer in a classroom environment.
- **Part task training:** The use of representative and real systems allows the student to visualise and simulate any given system (avionic, electrical, hydraulic) or to physically take apart and rebuild a mechanical system.
- **Computer Aided Instruction (CAI):** CAI is a very powerful and low cost method of increasing training effectiveness.
- **On-the-job training**
- **Simulators:** Flight simulators are available both with and without full motion.
- **Maintenance Training Rigs (MTR):** These are representative aircraft designed to be used solely for maintenance training.

### NH90 Final Assembly Lines
- **31.25%**
  - Airbus Helicopters
    - Marignane - France
  - Airbus Helicopters Deutschland
    - Donauwörth - Germany
  - Leonardo Helicopters
    - Tessera - Italy
  - Patria
    - Halli - Finland
  - Airbus Helicopters España
    - Albacete - Spain
  - Airbus Group Australia Pacific
    - Brisbane - Australia

- **5.5%**
  - Fokker
  - Netherlands

- **32%**
  - Leonardo
    - Italy

The NH90 program is associated with a complete set of training means designed to ensure the best operational level for the flight crews and the ground crews. There are already several training facilities in Europe and Australia.
THE COMPANY: NHINDUSTRIES

The NH90 Partnership, while taking the best from the European Rotorcraft and Defence Industries, is a collaboration between Airbus Helicopters, Leonardo Helicopters and Fokker Aerostructures.

- 31.25% – Airbus Helicopters
- 31.25% – Airbus Helicopters Deutschland
- 5.5% – Fokker
- 32% – Leonardo Helicopters

The company “NHIndustries” is the focal point for the NH90 programme.

NHIndustries is a French SAS company, based in Aix-en-Provence. It is wholly owned by Airbus Helicopters, Leonardo Helicopters and Fokker and provides the focal point for these companies for the NH90 programme.

Established in 1992, NHIndustries has managed the design, development and entry into service of the NH90 for both NAHEMA (NATO Helicopter Management Agency) and export customers.

NHIndustries is certified to EN 9100, ISO 9001 and AQAP 2110, for prime contractorship and management of international aeronautical programmes.

NHI’s primary responsibilities are to the customer and to the partner companies for the following activities:

- Airworthiness and the process of safety
- Programme management
- Management of the design, development and configuration process
- Management of the Integrated Logistic Support (ILS) process
- Management of contracts, new business and marketing activities
- Management of quality assurance

The NHIndustries quality management system is designed to give assurance that the NHIndustries processes render the outcomes that customers may expect. It creates more certainty in the business and supports NHIndustries recognition as an approved design and maintenance organisation. NHIndustries aims to provide a consistent service that meets stakeholders’ expectations by maintaining independent certifications to the internationally recognised EN9100, ISO 9001 and AQAP 2110 standards.

Additionally, NHIndustries is committed to supporting environmental issues through a policy of objectives and improvement programmes.