
Kristina Kostova

From: Romano Fabrizio <fabrizio.romano@leonardocompany.com>
Sent: 04 май 2020 г. 15:49
To: Kristina Kostova
Subject: Leonardo Helicopter Division reply to Public Procurement Tender issued by the Ministry of Health of Bulgaria for delivery of 2 HEMS helicopters
Attachments: 200404_Ann1_Configuration.pdf; 200404_Commercial Proposal.pdf; 200404_Ann2_Depliaandt (Cover).pdf; 200404_Ann2_Depliaandt.pdf; 200404_Ann3_Letter.pdf; 200404_Ann4_Price Form Table.pdf; 200404_Ann3_Letter (Cover).pdf

Dear Mrs Kristina Kostova,

In accordance with the Public Procurement Tender issued by the Ministry of Health of Bulgaria for delivery of 2 HEMS helicopters, Priority Axis 4 Regional Health Infrastructure, Operating Programme Developing Regions 2014-2020, LEONARDO HELICOPTER, a Division of LEONARDO SpA of Italy, is please to submit its reply to this tender today 04//05/2020 at 14.48 hrs Italy time, with the document enclosed to this email.

Kindly confirm reception of this Proposal by replying to this message,

Warmest Regards,

Fabrizio Romano
VP Turkey & Balkans, Global Sales
Leonardo Helicopter Division

Company General Use



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HELICOPTERS / AERONAUTICS / ELECTRONICS, DEFENCE & SECURITY SYSTEMS / SPACE

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LEONARDO HELICOPTERS BUDGETARY PROPOSAL TO THE MINISTRY OF HEALTH OF BULGARIA FOR THE SUPPLY OF TWO (2) AW109 GRANDNEW HEMS AND RELATED SERVICES

ANNEX 1

AW109 GRANDNEW CONFIGURATION

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1. AW109 GRANDNEW BASELINE AIRCRAFT

1.1. Airframe

- Aluminium alloy/composite material and bonded panel fuselage
- Semi-monocoque aluminium alloy tail boom
- Three-wheeled retractable landing gear
- Two (2) hinged jettisonable crew doors (LH and RH)
- Two (2) sliding passenger doors (LH and RH), 1.40 m opening, with jettisonable windows
- Acrylic transparent windshield and side windows
- Acrylic transparent overhead tinted windows
- Quick removable tail rotor drive shaft cover
- Separate baggage compartment with hinged door
- Removable fairing and cowlings, for complete accessibility to the controls and drive components
- Swivelling front wheel with tow bar attachment
- Quick opening hinged inspection doors, to allow visual check of engine oil levels and maintenance inspection points
- Grounding points
- Jacking and hoisting points

1.2. Rotors and Controls

- Titanium main rotor hub, corrosion protected, fully articulated with four (4) composite grips, four (4) elastomeric bearings, four (4) individually interchangeable composite material blades, swept tips, and dampers
- Steel tail rotor hub, corrosion protected, semi-rigid delta hinged type, with two (2) composite blades, individually interchangeable
- Cyclic and collective controls powered by two (2) hydraulic systems
- Hydraulically powered anti-torque system
- Adjustable friction devices on cyclic and collective system
- Force trim and artificial feel system
- Adjustable directional control pedals
- Flapping and droop restraint mechanism

1.3. Power Plant and Fuel System

- Two (2) Pratt & Whitney Canada PW207C turbo-shaft engines
- Two (2) independent electronic control systems (FADEC) with normal emergency and training operation modes and auto-start
- Engine-mounted fuel pump and filter assembly
- Engine-mounted oil pump and filter assembly
- Engine-mounted fuel control and governor
- Lubrication and cooling system
- Two (2) engine oil chip detectors
- Engine control panel
- Two (2) independent fuel systems with cross-feeding valve and control panel
- Three-cell crash-resistant fuel system (575 l/152 USgal)
- Submerged fuel boost pump (two [2] each engine)
- Airframe-mounted easy access fuel filter
- RH refuelling point
- Ground fuel drains

1.4. Transmission Drive System and Hydraulic System

- 960 shp for take-off and 900 shp continuous operation main transmission
- Three-stage transmission
- Two (2) freewheeling units
- Dual independent, redundant hydraulic systems
- Two (2) transmission-mounted hydraulic pumps with separate reservoir
- Two (2) ripple dampers
- Internal dry sump transmission lubrication with pressure and scavenge pump and oil filter
- Two (2) transmission oil chip detectors
- Single-stage, bevel gear T/R 90° gearbox including oil level sight glass and chip detector
- Transmission cooling and lubrication system
- Transmission shafts

1.5. Electrical System

- 24 V DC 33 Ah nickel-cadmium battery (19 cells) with temperature probe
- Two (2) 200 A self-cooled starter generators
- Two (2) voltage regulators
- Battery relay
- Two (2) interconnecting bus relays
- External power relay
- Distribution buses (one [1] battery, two [2] essential, two [2] emergency, two [2] main, two [2] auxiliary)
- External power receptacle
- Position lights (NVG friendly – green, red, white)
- Taxiing lights (two [2] RH + two [2] LH) and landing lights (two [2] RH + two [2] LH) on landing gear sponsons
- Two (2) anti-collision lights (NVG friendly)
- Two (2) cockpit utility lights
- Instrument lights with dimming switch
- Radio master switch with ground function

1.6. Flight/Navigation Instruments

- Pilot flight/navigation EFIS (one [1] display) with slip indicator and Remote Bug Panel (RBP)
- One (1) Radio Management System (RMS) RTU-4210 Collins
- VHF/AM VHF-4000E
- VOR/ILS NAV-4500 Collins
- Transponder (Mode S) TDR-94 Collins
- One (1) Attitude Heading Reference System (AHRS) with one (1) dual AHRS control panel
- Air Data Unit (ADU)
- Digital Audio Control System (DACS) COBHAM with one cockpit panel
- One (1) electronic clock
- One (1) magnetic compass indicator
- Magnetic sensor unit
- Pitot tube right/left

1.7. Instrumentation (on IDS Display)

- LCD Integrated Display System (IDS)
- Dual gas generator speed indicator (N1%)
- Dual turbine outlet temperature indicator (TOT°C)
- Dual torque meter indicator (TQ%)
- Dual power turbine speed indicator (N2%)
- Rotor speed indicator (NR %)
- Transmission oil pressure (PSI) and temperature (°C) indicator
- Two (2) engine oil pressure (PSI) and temperature (°C) indicators
- Two (2) fuel pressure indicators (PSI)
- Two (2) fuel quantity indicators (kg)
- Two (2) fuel flow indicators (kg/hr)
- Two (2) flight controls hydraulic system pressure indicators (PSI)
- Two (2) utility hydraulic system pressure indicators (PSI)
- Outside air temperature indicator (°C)
- Two (2) AC voltmeters (VAC)
- Two (2) DC voltmeters (VDC)
- Two (2) DC ammeters (Amp)

1.8. Warning/Caution Advisory and Maintenance System

- Two (2) Master warning lights
- Two (2) Master caution lights
- Warning, caution and advisory messages (on IDS display)
- Aural warning generator system
- Engine fire detection system
- Exceedance recorder system (on IDS display)
- Warning horn (cabin)

1.9. Interior Arrangement

- Crash-resistant pilot seat, fore and aft adjustable, with lap belts and headrest
- Aluminium alloy honeycomb reinforced floor with anti-skid finishing
- Ventilation ram air inlets
- Anti-reflection instrument panel

1.10. Exterior Finishing

- Finishing in accordance with manufacturer specification (NTA 893 A)
- Primer exterior painting

2. STANDARD AIRCRAFT

2.1. Standard Equipment

- Active Noise Reduction (ANR) headsets (pilot and co-pilot)
- Baggage compartment lights
- Crash-resistant co-pilot seat, fore and aft adjustable, with lap belts and headrest
- Crew open door actuators
- First aid kit
- Fuel drain electrical valves
- Internal structural provisions for utility equipment
- Portable fire extinguisher
- Shoulder harness with inertial reels (pilot and co-pilot)
- Tail boom strake

2.2. Single Pilot Dual Controls IFR Avionic Package

- Pilot flight/navigation EFIS (two [2] displays) with embedded FMS, Synthetic Vision (SVS), Helicopter Terrain Awareness and Warning System (HTAWS), slip indicator and Remote Bug Panel (RBP)
() In lieu of basic Pilot flight/navigation EFIS (one [1] display) with slip indicator and Remote Bug Panel (RBP)*
() Data services subscription for the update of the Navigation databases from Jeppesen® is under the Customer's responsibility.)*
- Co-pilot flight/navigation EFIS (two [2] displays) with embedded FMS, Synthetic Vision (SVS), HTAWS, slip indicator and Remote Bug Panel (RBP)
- Reversionary Control Panel (RCP)
- EFIS pilot/co-pilot navigation synchronisation switch (FMS data)
- Electronic Standby Instrument System (ESIS)
- Second Radio Management System (RMS) RTU-4210 Collins
- Second VHF/AM VHF-4000E Collins
- VOR/ILS/ADF NAV-4000 Collins
- Distance Measuring Equipment DME-4000 Collins

- Radio altimeter ALT-4000 Collins
- Second Attitude Heading Reference System (AHRS)
- Second Air Data Unit (ADU)
- Pilot GPS/SBAS Genesys Aerosystems interfaced to EFIS/FMS
- Co-pilot GPS/SBAS Genesys Aerosystems interfaced to EFIS/FMS
- Digital Audio Control System (DACS) COBHAM additional cockpit panel
- Four-axis dual duplex digital AFCS with integrated Flight Director
- Second electronic clock
- Second magnetic compass indicator
- Emergency Locator Transmitter (ELT) (with Navigation Interface Module embedded)
- Dual controls

2.3. Additional Equipment

- Airframe hourmeter
- Baggage compartment extension (1.9 m)
(* *May be affected by avionics customisation*)
- Two (2) engine compartment fire extinguishers
- Fuel cap with key-lock
- Pulsed chip detectors (in lieu of quick disconnecting chip detectors)
- Reinforced windshields
- Retractable/rotating landing light (nose-mounted)
- Rotor brake
- Windshield wipers (pilot and co-pilot) with wiper switch on cyclic grips

2.4. Interior Trim

- Air conditioning Environment Control System (ECS)
- Primer finished cabin walls

2.5. Painting

- Standard painting and finishing
 - Up to four colours from Leonardo Helicopters selection
 - Painting scheme and finishing from LHD selection
 - Registration marks and logos

2.6. Miscellaneous / Ground Equipment

- Air intake/exhaust covers
- Ground tools kit (including tow bar, lifting tool, wheel chocks)
- Pitot tubes covers
- Rotorcraft Flight Manual (RFM) and technical publications
- Tie-down fittings (main rotor retention straps).

3. PROPOSED CONFIGURATION

3.1. Interior Equipment - Cabin

- EMS Interior #1' – Single/Dual Stretcher – Fixed Parts
 - EMS multimission floor
 - Rails and drains included
 - Roof liners with soundproofing and EMS provisions and rails
 - Aft bench panel (including inertial reels and safety belts)
 - EMS electrical system with cabin lights
 - Medical DC-power system (12/28 VDC)
 - 3rd ICS station in passenger cabin
 - Stretchers support provision
 - Cargo retainer provision
 - Oxygen distribution system
 - Sliding windows on cockpit and cabin door windows
 - Cabin Loudspeaker
 - Three (3) Headset Bose ANR type
- EMS Interior #1' – Single Stretcher Installation – Removable Parts
 - One (1) Crashworthy medical seat swivelling and tracking
 - Aft facing
 - Two (2) Crashworthy fixed rear seat
 - Primary stretcher platform
 - LH side with aft and fwd locking mechanism
 - Medical cabinet (provisions for up to four (4) oxygen bottles, 2400 l total, bottle excluded)
 - One (1) Primary stretcher (foldable 1.85 m)
 - Cargo net
 - Not available with 4-cell fuel system

3.2. Avionics Equipment

- 8.4" cockpit central display
- Traffic Advisory System TAS-620 Avidyne
Or equivalent model
- Weather radar RDR 2000 Bendix/King
Presented on EFIS
- 24 V DC 33 Ah nickel-cadmium battery (20 cells) (in lieu of 19 cells)
- Digital map Euronav VII Euroavionics interfaced to FMS (presented on 8.4" display)
Requires the installation of 8.4" display.
The standard worldwide dataset includes the Jeppesen Air Navigation database (Jeppesen Air Nav DB World), the VMAP Level 0 basic vector dataset (VMAP0 World), the DTED Level 0 terrain database (SRTM 90 World), the Operational Navigation Chart (ONC 1000 World), the Tactical Pilotage Chart (TPC 500 World) as well as the JeppView Module. Additional maps/options and any updates need to be ordered directly to Euroavionics by the Customer.
- Cockpit Voice / Flight Data Recorder (CVR/FDR) Penny & Giles
Cable/software not included
- Night Vision Imaging System (NVIS) / NVG compatibility
Includes NVG curtain
- ADS-B Out capable Transponder TDR-94 Collins
In lieu of standard Transponder
- V/UHF AM/FM Flexcomm II RT-5000 Wulfsberg

3.3. Utility Equipment

- Vertical baggage compartment door
In lieu of standard type
- Bleed air heater
In lieu of air conditioning ECS
- Baggage compartment extension (2.3 m)
- External loudspeakers (250 W) provision
- External loudspeakers (250 W) removable
- Wire strike protection system
- Weather probe system
- Electrical outlet 220VAC in cabin
- Switch to select ground (AC 115V/230V external power/ground power unit) or helicopter electrical power to power all cabin outlets on ground

3.4. Finishing - Painting

- Customized painting and finishing
 - Customized colours*
 - Customized Painting Scheme and Finishing*
 - Registration Marks and Logos*
- Main rotor blades high visibility painting

4. LOOSE EQUIPMENT

- Passenger's conversion kit Including a floor carpet.
 - Medical seats, Primary stretcher assembly, Medical cabinet and Secondary stretcher assembly (if present) must be removed for installation.*
 - One (1) Crashworthy fixed rear seat (Fwd facing, with foldable backrest and removable headrest)
 - Crashworthy seating bench aft facing (three [3] seats)
- Medical equipment retainers
 - Loose equipment*
- Incubator platform
 - incubator excluded*
- Helmets LH 350 Gallet including dual visor housing (eight [8] x 2 h/c)
- Protective helmets for the medical personnel in the EMS compartment (eight [8] x 2 h/c)
- Spinal board for patients with back injury, an adult and children set, with belts and head immobilization set (one [1] x 2 h/c)
- Carrying sheet or transfer matters (one [1] x 2 h/c)
- Immobilisation set for fractures (one [1] x 2 h/c)
- C-cervical collar-set (one [1] x 2 h/c)
- Extraction upper spinal immobilisation device/extension devices/short spinal board (one of these devices) (one [1] x 2 h/c)
- Oxygen bottle (600 l each) (four [4] x 2 h/c)
- Portable oxygen bottle (400 l) (one [1] x 2 h/c)
- Portable aspirator (one [1] x 2 h/c)
 - Min one (1) h autonomy
 - Autoclave-disinfected collection vessel with a minimum one (1) litre volume
 - Protection against liquids and solid particles – minimum IP44 class
- Transport respirator (ventilator) (one [1] x 2 h/c)
 - Min four (4) h autonomy
 - Minute volume in a minimum range from 2 to 20 l/min

- Protection against liquids and solid particles – minimum IP22 class
- Infusion syringe pump (two [2] x 2 h/c)
 - Min two and half (2.5) h autonomy
 - Compatible with syringe sizes - minimum 10, 20, 30, 50 and 60 ml
 - Protection against liquids and solid particles – minimum IP22 class
- Equipment for management of life-treating situations (one [1] x 2 h/c)
 - Colour display with a minimum 7" display
 - Protection against liquids and solid particles – minimum IP44 class

5. OPTIONAL EQUIPMENT

The following equipment, relates to a Customer-specific request.

Description and unit price are included in Annex 4 "Bid Price Form" for Customer selection and following your instructions. Selection of this equipment may impact delivery date; confirmation of this will be given when a final configuration is determined.

The selected equipment is subject to the Terms and Conditions detailed in this proposal.

- 177 USgal crash-resistant fuel system (in lieu of 152 USgal)
Not compatible with dual stretcher installation
- Cargo hook (1150 kg) provision
Requires either the rear view mirror or the cargo hook camera
- Cargo hook / cargo cameras
Requires the installation of 8.4" display
- Cargo hook (1150 kg) removable
- External rescue hoist (272 kg/600 lb) (Goodrich) provision including step bar
- External rescue hoist (272 kg/600 lb) (Goodrich) removable with single control pendant
- Wireless ICS Polycon System (UHF)
Required for Human External Cargo (HEC) operations
- Opening passenger doors lock
- Snow skis/slump protection pads provision
- Slump protection pads removable
- Snow skis removable
- Searchlight SX-16 Nightsun provision – RH side nose installation

- Searchlight SX-16 Nightsun removable – RH side nose installation
- Searchlight IR filter
- Engine air particle separators
- Tetra radio provision
380 - 400 MHz
- Provision GSM interfaced with ICS
- NVG goggles OPTIX "Diana A"
- Hoist/external sling load operator protective helmets (with the option to connect NVGs) and integrated equipment for the communication with the pilots (Four [4] x 2 h/c)
- Pairs of protective gloves for the hoist/external sling load technicians (Four [4] x 2 h/c)
- Safety belts or harness for the hoist/external sling load technicians (Four [4] x 2 h/c)
- Protective helmets for a rescue specialist with integrated wireless communication equipment to communicate with the helicopter flight crew (Four [4] x 2 h/c)
- Rescue specialist harness, connected to the hoist (Four [4] x 2 h/c)
- Rescue triangle with connection elements for lifting of rescued person/patient with the hoist (One [1] x 2 h/c)
- Stretcher with vacuum mattress for the hoist for 1 patient with equipment for the rescue specialist connecting him to the hoist during lifting up (One [1] x 2 h/c)
- Safety harness/belt for rescued person/patient, lifted with the hoist (One [1] x 2 h/c)

If any of the above equipment is selected the related equipment price (prices are duly indicated in the Annex 4 "Bid Price Form") will be added to the Helicopter price stated in line 1.01 of the "Bid Price Table" in Annex 4.

AgustaWestland AW109
GRANDNEW



Leonardo Helicopters Budgetary Proposal
to the Ministry of Health of Bulgaria for
the Supply of Two (2) AW109 GrandNew
Helicopters and Related Services



Proposal No: IGS200404
May 2020



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1. INTRODUCTION

1.1. About Leonardo

Leonardo Helicopters is a division of Leonardo, a global high-tech company in the Aerospace, Defence and Security sectors.

Designing and developing leading-edge products, services, integrated and dual-use solutions, Leonardo works with governments, Armed Forces, institutions and citizens, from the domains of air, land and sea to those of space and cyberspace.

With over 45,000 employees, we have a strong industrial presence in four main markets – Italy, the United Kingdom, the United States and Poland – and an extensive network of strategic partnerships worldwide. More than 150 countries use products, systems and services provided by Leonardo every day.

Over 10,000 of our people are dedicated to Research and Development, into which around 12% of company revenues are invested. Our employees are dedicated to building the future through technological innovation.

The history of Leonardo Helicopters goes back well over a century, building on the foundations of industry leader AgustaWestland. With a wealth of experience in the sector, Leonardo Helicopters performs the research, design, development, production, customer support and marketing for its extensive range of products in-house. Our current production covers all the main helicopter weight categories, from the 1.8 tonne single-engine to the 16 tonne three-engine.

We place great emphasis on customer satisfaction, and offer extensive support for both maintenance and training. Centres worldwide can provide round-the-clock service for spares, repair and overhaul throughout the product lifecycle. The companywide initiative “TeamUp” spans the entire breadth of support and training delivery, ensuring Customers the best possible level of service.

1.2. The Helicopter

The GrandNew is a new top-of-the-range helicopter from the AW109 light twin helicopter family. It represents the continuous evolution of the original concept to provide modern solutions to market requirements for a multitude of applications.

Positioned at the upper end of the light twin Certification Specification (CS)/Joint Aviation Requirement (JAR) 27 segment (3,175 kg/7,000 lb), the GrandNew features high performance capabilities, providing levels of cabin space and payload previously available only on intermediate category helicopters, whilst retaining attractive economics typical of the light twin category.

The GrandNew’s spacious, unobstructed and rapidly reconfigurable passenger cabin (2.30 m/7 ft 7 in maximum length) is easily accessible through large sliding cabin doors (1.40 m/4 ft 7 in) on each side of the fuselage. A comprehensive selection of interiors and mission equipment makes

the GrandNew a suitable platform for a multitude of roles, including Corporate/VIP transportation, Emergency Medical Services (EMS), Law Enforcement, Offshore and various Utility operations.

The GrandNew's 815 shp, new generation, Pratt & Whitney Canada PW207C turboshaft engines with Full Authority Digital Engine Control (FADEC) ensure outstanding performance capabilities in both hovering and flight, including full Category A/Class 1 capability, whilst retaining low fuel burn characteristics. Its payload/range characteristics and the very high cruise speed give the GrandNew capabilities that are unique in its category.

The new glass cockpit with a redesigned layout provides excellent visibility, enhancing situational awareness, and an ergonomic working space for the pilots. The new full digital, scalable avionics system incorporates the Chelton Flight Systems Flight-Logic Electronic Flight Instrument System (EFIS) with Flight Management System (FMS), flight recording, Terrain Awareness Warning System (TAWS), Synthetic Vision and Highway in the Sky (HITS) embedded functions to deliver ultimate situational awareness and ground-breaking automated flight management capabilities. State-of-the-art digital avionics for single/dual pilot Instrument Flight Rules (IFR) operation and a four-axis dual duplex digital autopilot coupled with a Flight Director maximise operational safety and ensure a low pilot workload. A new Radio Management System (RMS) permits the integrated management of radio communication and navigation systems of the helicopter, while the Integrated Display System (IDS) provides aircraft/engine data monitoring, crew alert and maintenance data pages.

The GrandNew features a modernised fuselage, made largely from high-performance composite material. A high level of safety is available to the flight crew and the passengers thanks to the cocoon-type high strength airframe, fitted with a crash-resistant fuel system and crashworthy seats for both the pilot(s) and passengers.

The GrandNew's composite material main and tail rotor blades feature optimised geometry and tip profile for high aerodynamic efficiency, and contribute to reducing external noise to levels well below the International Civil Aviation Organisation (ICAO) noise limits.

Operating economics benefit from low level of maintenance requirements, both in terms of materials and man-hours required. Only a few main components are subject to overhaul, whilst a limited number of low-cost parts are subject to retirement: In both cases Time Between Overhaul (TBO) or retirement hours are high. In addition, the options of an attractive Warranty Policy and a competitive "pay-by-the-hour" spare parts support programme ensure optimum operating cost control.

**LEONARDO HELICOPTERS BUDGETARY PROPOSAL
TO THE MINISTRY OF HEALTH OF BULGARIA FOR THE
SUPPLY OF TWO (2) AW109 GRANDNEW HEMS
AND RELATED SERVICES**

ANNEX 2

BROCHURE AW109 GRANDNEW - EMS

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AgustaWestland
GrandNew EMS

 **LEONARDO**
HELICOPTERS

AW109
GRAND NEW

SEE FURTHER. GO ANYWHERE

ADVANCED CAPABILITY FOR EMERGENCY MEDICAL SERVICES

The GrandNew is a modern top-of-the-range light twin rotorcraft offering outstanding performance, speed, payload, excellent operational flexibility as well as high safety through advanced navigation and situational awareness technology.

Designed to operate in the challenging conditions associated with EMS, Medevac and Search and Rescue missions over land and water, the GrandNew fully complies with safety, performance and effectiveness requirements to successfully carry out these missions anytime and anywhere.





SPACE AND ACCESSIBILITY

Unmatched access through wide sliding doors to a large 3.9 m³ / 137.7 ft³ cabin facilitates operational flexibility in critical tasks such as hoist operations. The unobstructed space allows for full body patient access in a wide range of layouts which may include single or dual stretcher. Careful configuration of equipment ensures the tools for the task are placed within easy reach.

GrandNew benefits from:

- Easy loading of stretchers through 1.40 m / 4'7" wide sliding doors
- Flexible configurations including 2 stretchers and 2 medics or 1 stretcher with up to 4 medics
- Sliding and swivelling medical attendant seat
- Cabin rails for efficient placement of equipment
- High capacity separated baggage compartment
- Ample internal storage space
- Simplified hoist operations for rescues.

SAFETY

Safe in design, the GrandNew incorporates system redundancy, crash resistant fuel system and seating in a superior impact resistant cocoon type airframe. Powerful PW207C turboshaft engines with FADEC enable safe flight even in single engine conditions from the very smallest of landing sites or rooftops of city centre hospitals.

- Cat. A Class 1 performance enabling safe flight in O.E.I conditions
- No payload reduction up to ISA+20 (35°C @ SL) in Category A Vertical Take-off and Landing
- Crash resistant airframe, fuel systems and seats
- State of the art avionics suite for enhanced situational awareness.

ENVIRONMENTALLY FRIENDLY

- New main and tail rotor system design minimises the external noise signature reducing any disturbance in densely populated areas
- Take-off, fly-over and approach noise certification data well below the most stringent international requirements
- Low specific fuel consumption and emission of pollutants.

ADVANCED NAVIGATION

GrandNew's state-of-the-art navigation suite, based on a dual Flight Management System (FMS) and an advanced digital dual-plex 4-axis autopilot, incorporating GNSS / SBAS capabilities, provides lateral and vertical guidance for in-flight procedures including approach operations to LPV minima. A new benchmark is thereby set in operating capability.

SITUATIONAL AWARENESS

An ergonomic glass-cockpit integrates FMS, Synthetic Vision System (SVS), and HTAWS functions to reduce crew workload enhancing safety in single and dual pilot operations. A dedicated 8.4" central cockpit display is available for inputs such as the Digital Map System. Enhanced Vision System or FLIR, Superior situational awareness in support of safe operations is enhanced through excellent external visibility, ergonomic cockpit layout for single pilot IFR operations, new EFIS featuring Synthetic Vision, Highway In The Sky and Helicopter Terrain Awareness Warning System (included in the basic configuration). Enhanced Vision System, cargo hook cameras.



FLEXIBILITY

A spacious cabin and modular interior ensure GrandNew the versatility to engage in various roles. In EMS operations GrandNew is proven to meet a broad range of complex missions from primary emergency rescues to secondary patient transfer tasks. A wide range of specialist equipment supports this capability including:

- Stretchers up to 2 m / 6' 7" in length
- Intubation saddle
- Incubator
- Oxygen distribution system (up to 2,400 l capacity)
- Drawers for medical materials
- Cabin rails for optimum positioning of seats and medical equipment
- High intensity lighting system
- Air-conditioning
- Passenger conversion kit

Search and Rescue equipment includes:

- 272 kg / 600 lbs rescue hoist with 90 m / 295' 3" cable length
- Dual cargo hook (1150 kg / 2,535 lbs - 500 kg / 1,102 lbs)
- Search light
- FLIR
- External loudspeakers
- Rapelling hooks
- Emergency floats

WORLDWIDE SUPPORT

The AgustaWestland GrandNew benefits from an extensive network of customer representatives, technicians and engineers, complemented by repair, overhaul and spares facilities throughout the world. Regional Training Academies offer world-class training from ab-initio and type certification through to advanced mission training. Using a combination of instructor-led learning with fully equipped modern classrooms and the helicopter, advanced multimedia technology, physical and virtual training aids and Full Flight Simulators, Leonardo Helicopters leverages more than 50 years of experience in the delivery of high quality training for aircrew and technicians.

LOW OPERATING COST

With GrandNew, operators achieve the attractive combination of a platform available at light twin acquisition and operating costs together with the operating capability associated with larger Part 29 helicopters. AgustaWestland GrandNew retains a high residual value and is cost effective to maintain due to:

- Competitive man-hour per flight-hour maintenance costs
- High reliability, TBO and retirement life on components
- Modern powerplant with reduced maintenance cycles



GRANDNEW CHARACTERISTICS

Dimensions			
Overall length	12.96 m	42 ft 0.6 in	
Overall height	3.40 m	11 ft 0.2 in	
Rotor diameter	10.83 m	35 ft 0.6 in	
Propulsion			
Powerplant	2 x Pratt & Whitney Canada PW207C		
Engine Rating			
AEO Take off power	2 x 548 kW	2 x 735 shp	
Weight (MTOW)			
Internal load	3,175 kg	7,000 lb	
External Load	3,200 kg	7,055 lb	
Capacity			
Crew	1-2		
Stretchers	2 stretchers and up to 2 medical attendants		
Fuel			
3-cell fuel system (460 kg)	575 l	152 USgal	
4-cell fuel system (535 kg)	669 l	177 USgal	
Performance (ISA, 3,175 kg / 7,000 lb)			
Cruise Speed (S.L.)	289 kph	156 kt	
Maximum range (1)	706 km	381 nm	
Maximum endurance (1)	3 h 40 min		
Rate of Climb (S.L.)	9.2 m/s	1,820 ft/min	
Service Ceiling	4,880 m	16,000 ft	
Hover IGE	4,750 m	15,600 ft	
VTOL cat. A	945 m	3,100 ft	

(1) with 177 USgal, no reserve, @ 5,000 ft



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leonardocompany.com

Cascina Costa di Samarate (VA) Italy
04 May 2020

Subject: Comments and suggestions to Leonardo Helicopters response to the Bulgarian MoH RFI – Market Consultation

To the Ministry of Health of Republic of Bulgaria

Dear Madams and Sirs,

Leonardo went through the Technical Specification document issued by the Bulgarian Ministry of Health to purchase two brand new HEMS helicopters. Based on a deep analysis the offered AW109 GrandNew helicopter is fully compliant against all the requirements.

Leonardo reserves the possibility to kindly ask the Bulgarian Ministry of Health few feedbacks relevant to comments to the following requirements.

Please find here below our comments regarding technical specifications.

2.11 The helicopter design shall be in accordance with standard BDS EN-13718-2:2015 or equivalent, as follows.

- **Loading of the medical personnel and patients from both sides of the helicopter, provided with sliding doors;**

Leonardo: please confirm it is allowed to load patient from one side of the helicopter and medical personnel from the other one.

With reference to the following pictures the GrandNew helicopter is compliant being equipped with two (2) wide opening (1.4 m) cabin sliding doors (LH & RH) allowing loading of patient from LH side and of medical personnel from RH side.



Loading of the medical personnel from the RH side of the GrandNew helicopter

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Tax Code & Company Register no. 00401990585

VAT no. 00881841001

R.E.A. no. 7031



Loading of the patient on the stretcher from the LH side of the GrandNew helicopter

4.07 Maximum range at SL, at best endurance speed – not less than 270 nm (500 km)

Leonardo: please confirm that the speed to be taken into account for max range calculation is the best range speed instead of best endurance speed which is mainly used to calculate max flight endurance.

With above assumption the GrandNew helicopter is compliant because with standard fuel tanks (3-cell fuel tanks system), has a max range of 300 nm @ SL, ISA, best range speed.

6.09 Mast moment indication shall be provided (indication for the maximum torque)

Leonardo: Please confirm the mast moment indication is not a mandatory item being an inherent design feature only of few helicopters equipped with a non-fully articulated main rotor. The GrandNew helicopter does not require such a system being equipped with a fully articulated main rotor; considering the slope landing envelope, the GrandNew can operate maintaining loads at mast within the max limits so not penalizing the main rotating components lives.

3.01. (last dash) - number of the flight crew, medical attendants and patients: 2 (two) members of the flight crew, 2 (two) medical attendants in the EMS compartment and 1 (one) or 2 (two) patients on a stretcher.

Leonardo: We assume that the text "...and 1 (one) or 2 (two) patients on a stretcher" is a technical mistake, as at all the other places when the number of patients is mentioned, the requirement is for 1 patient/stretcher only. For this reason configuration is made assuming only (1) patient.

8.11 Radar Altimeter

Leonardo: please note that this requirement is repeated in art. 8.24, so one of these should be removed to have a consistency. Radar altimeter is added in the configuration

13.03. Main Gearbox vibration absorbing system.



Leonardo: the vibration levels of the AW109 helicopter without the use of the mast vibration absorber (MVA) system are within the normal limits, not affecting passengers and crew comfort, and therefore Leonardo is confident not to recommend to use the system in the helicopter in EMS configuration as a mandatory requirement.

13.10. Engine dust protection filters.

Leonardo: Based on our experience, Leonardo can confirm that this requisite is covered by the proposed Engine Air Particle Separator (EAPS) devices that provide reliable dust and sand protection.

Fabrizio Romano
VP Turkey & Balkans, Global Sales



Превод на български език

Касчина Коста ди Самарате (ВА), Италия
04 май 2020 г.

Относно: Коментари и препоръки към Индикативна оферта на Leonardo Helicopters в отговор на Пазарна консултация на Министерството на здравеопазването на Р България

До: Министерство на здравеопазването на Р България

Уважаеми дами и господа,

Дружество Leonardo проучи техническите спецификации на Министерството на здравеопазването на Р България за доставка на два хеликоптера за спешна медицинска помощ. На базата на задълбочения анализ, предложеният хеликоптер AW109 GrandNew напълно отговаря на всичките изисквания.

Запазваме си възможността да дадем на Министерството на здравеопазването нашите коментари и препоръки по отношение на някои изисквания в техническите спецификации по-долу:

Коментарите относно техническите спецификации са както следва:

2.11 Конструкцията на хеликоптера да е съобразна със стандарт БДС EN-13718-2:2015 или еквивалент, както следва:

- **Затоварване на медицинския персонал и пострадалите лица, от двете страни на хеликоптера осигурено с плъзгащи се врати;**

Коментар на Leonardo: моля да потвърдите, че е допустимо да се затоварва пациент от едната страна а хеликоптера и медицинския персонал от другата.

По отношение на снимките, дадени по-долу, хеликоптер GrandNew е съвместим, оборудван с две плъзгащи се странични врати на кабината, отварящи се широко (1,40m) – от лявата и дясната страна, които позволяват затоварване на пациент от лявата страна и медицински персонал от дясната.





Затоварване на медицински персонал от дясната страна на хеликоптер GrandNew



Затоварване на пациент на носилка от лявата страна на хеликоптер GrandNew.

4.07 Максимална далечина на полета на морското равнище, при скорост за максимална продължителност – не по-малка от 270 nm (500 km).

Коментар на Leonardo: моля да потвърдите, че скоростта, която се използва за изчисляването на максималната далечина е скорост за максимална далечина вместо скорост за максимална продължителност (тя се използва основно за изчисляване на продължителността на полета).

При горното допускане хеликоптер GrandNew отговаря на изискването, защото при стандартна горивна система (система от резервоари с 3 клетки), максималната далечина е 300 nm (556 km) на морското равнище, при условия на морското равнище, MSA и скорост за максимална далечина.

6.09 Да е предвидена индикация за максималния въртящ момент (Mast Moment Indication)

Коментар на Leonardo: моля да потвърдите, че индикацията за максималния въртящ момент не е задължително изискване, защото това е органичен елемент от конструкцията само на няколко модела хеликоптери, използващи твърда (безшарнирна) конструкция на носещия винт (основния ротор).

При хеликоптер GrandNew не се изисква използване на подобна система, защото е оборудван с шарнирен изцяло подвижен основен ротор. При кацане на наклонен терен, GrandNew може да оперира, поддържайки натоварването на вала в рамките на максималните ограничения, като това не намалява ресурса на основните въртящи се части на ротора.

3.01. (последно тире) - брой на членовете на летателния екипаж, медицинските лица и пациентите – 2 (двама) членове на летателния екипаж, 2 (две) медицински лица в санитарното отделение и 1 (един) или 2 (двама) пациенти на носилки.



Коментар на Leonardo: ние приемаме, че текстът "...и 1 (един) или 2 (двама) пациенти на носилки" е техническа грешка, защото на всички останали места, където се споменава брой на пациенти, има изискване само за 1 пациент/носилка. Поради тази причина, конфигурацията е дадена, като се допуска транспорт само на 1 (един) пациент.

8.11 Радиовисотомер – Radar Altimeter

Коментар на Leonardo: това изискване е повторено в т. 8.24, така, че едно от двете трябва да се премахне, за да има съгласуваност. Радиовисотомер е добавен в предложената конфигурация.

13.03. Система абсорбираща вибрациите на основната трансмисия.

Коментар на Leonardo: нивата на вибрации на хеликоптер AW109 без използването на система за абсорбиране на вибрациите (mast vibration absorber - MVA) са в нормален диапазон, и не оказват влияние върху комфорта на пътниците и екипажа, и затова Leonardo не препоръчва използване на подобна система на хеликоптера в конфигурация за спеша медицинска помощ като задължително изискване.

13.10. Противопрахови филтри за входните устройства на двигателите.

Коментар на Leonardo: на базата на опита, Leonardo потвърждава, че това изискване се покрива от предпазното устройство Engine Air Particle Separator (EAPS), което осигурява надеждна защита от прах и пясък.

Фабрицио Романо
Вицепрезидент, Балкани, Гърция и Турция, Глобални Продажби

**LEONARDO HELICOPTERS BUDGETARY PROPOSAL
TO THE MINISTRY OF HEALTH OF BULGARIA FOR THE
SUPPLY OF TWO (2) AW109 GRANDNEW HEMS
AND RELATED SERVICES**

ANNEX 4

PRICE FORM TABLE

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No	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
1	<p>Technical Requirements</p>				
1.01	<p>The project is aimed at procuring two (2) newly-manufactured helicopters for emergency medical services, transport of patients in need and medical teams. The helicopters shall be outfitted with a specialised emergency medical services interior, medical equipment and devices, and modern avionics, meeting the latest EASA standards and requirements, able to perform the full spectrum of missions that may be assigned by the Ministry of Health (MoH). The technical requirements to the helicopters are described in details in the technical specification file.</p>	<p>€ 7.977.000 (Price for 1 helicopter)</p>	<p>€ 7.977.000 (Price for 1 helicopter)</p> <p><i>In the event of confirmed interest for the purchase of 2+5 helicopters , LHD shall offer an incentive in Logistic support and Training, with content and value at the time of contract finalization.</i></p>	<p>Mandatory</p>	<p><i>Unit Price for one (1) GrandNew helicopter as described in Annex 1 "Configuration", Paragraph [1] to [4], DAP (INCOTERMS 2010) Sofia, Bulgaria.</i></p> <p><i>Includes Scheduled Maintenance for 300 FH/year or initial 2 years (whichever occurs first)</i></p>
1.02	<p>Provision of the TETRA radio, working in the 380-400 MHz band (radio to be provided by the Contracting Authority - MoH), including the antenna and wiring, and its integration to the helicopter communication system.</p>	<p>€ 13.000</p>		<p>Optional</p>	
1.03	<p>GSM public communication network equipment, integrated with the helicopter communication system.</p>	<p>€ 9.900</p>		<p>Optional</p>	
1.04	<p>Night Vision Goggles (NVG) - Gen 3, Class B according to MIL STD-3009.</p>	<p>€ 14.200</p>		<p>Optional</p>	<p><i>This item will be delivered (if selected) as company qualified</i></p>

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
1.05	A provision for a steerable searchlight, controlled by the flight crew, fitted with an IR filter, compatible with Gen 3 NVGs.	€ 22.100		Optional	with a Certificate of Conformity
1.06	Auxiliary fuel tank	€ 25.000		Optional	
1.07	MGB vibration absorbing system (mast vibration absorber)	Not applicable		Optional	item not necessary for the AW109 GrandNew
1.08	A steerable searchlight, controlled by the flight crew, fitted with an IR filter, compatible with Gen 3 NVGs	€ 53.500		Optional	
1.09	A provision for an external rescue hoist with a minimum 230 kg capacity and at least 70 m cable length.	€ 53.900		Optional	
1.10	An external rescue hoist with a minimum 230 kg capacity and at least 70 m cable length.	€ 303.000		Optional	Including Wireless ICS Polycon System (UHF) Required for Human External Cargo (HEC) operations
1.11	A provision for a cargo hook for external sling cargo transport, with a minimum 500 kg capacity. The helicopter shall be equipped with a cargo hook camera or a mirror.	€ 23.000		Optional	
1.12	A cargo hook for external sling cargo transport, with a minimum 500 kg capacity. The helicopter shall be equipped with a cargo hook camera or a mirror.	€ 69.900		Optional	
1.13	Slump pads and snow surface landing pads/platforms, installed on the landing gear legs or skids.	€ 180.700		Optional	
1.14	Engine dust protection filters.	€ 89.000		Optional	

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/Optional (Unit Price)	Note
1.15	Opening passenger doors lock	€ 2.000		Optional	<i>To be installed if Cargo Hook (line 1.12) is selected</i>
2	General Requirements				
2.01	One (1) compact-size ground power unit for starting up and checks of the helicopter's systems with compact size, powered by the mains (electrical grid), rated at a voltage of ~220 V	€ 42.100		Optional	
2.02	One (1) set of wheels for ground helicopter transport if skid landing gear is used	Not applicable		Optional	Not Applicable
2.03	One (1) tow bar or platform for ground helicopter transport	Included		Optional	<i>Included in the proposed price at line 1.01</i>
2.04	One (1) set of chocks if using three-cycle wheeled landing gear, or auxiliary wheels if applicable when skids are used	Included		Optional	<i>Included in the proposed price at line 1.01</i>
2.05	One (1) set of lifting tools/jacks and jack attachment tools.	€ 54.100		Optional	
2.06	One (1) set of covers for the helicopter.	Included		Optional	<i>Included in the proposed price at line 1.01</i>
2.07	One (1) set of hoses and appliances for draining the engine, MGB and TGB oil.	€ 12.000		Optional	
2.08	One (1) set of equipment for fuel tank draining.	€ 19.200		Optional	
2.09	One (1) set of tools for line servicing of the helicopter.	€ 140.500		Optional	
2.10	One (1) cable for external power supply of the EMS compartment by the mains, ~220 V voltage, minimum 20m long.	€ 300		Optional	

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
2.11	<p>One (1) laptop computer for storage/work with the helicopter technical information and for downloading/analysis of the FDR/CVR information, meeting the following requirements.</p> <ul style="list-style-type: none"> - dual-core processor with not less than 2 GHz frequency - graphic video card with no less than 4 GB memory - hard disk with capacity no less than 500 GB, - optical recording device DVD-RW Dual Layer - no less than 3 USB ports - display of no less than 15" size - the Contractor shall provide at his own expenses a Flight Data Analysis and downloading software for the helicopter's FDR/CVR device. 	<p align="center">€ 10.400</p>	<p align="center"><i>Optional</i></p>	<p align="center"><i>Optional</i></p>	
2.12	<p>- Eight (8) per helicopter flight helmets (with the option to connect NVGs), and with transparent and dimmed protective visors. Sizes will be additionally provided by the Contracting Authority.</p>	<p align="center">Included</p>		<p align="center"><i>Optional</i></p>	<p><i>Helmets LH 350 Gallet including dual visor housing. Included in the proposed price at line 1.01</i></p>
2.13	<p>- Four (4) per helicopter hoist/external sling load operator protective helmets (with the option to connect NVGs) and integrated equipment for the communication with the pilots. Sizes will be additionally provided by the Contracting Authority.</p>	<p align="center">€ 97.100</p>		<p align="center"><i>Optional</i></p>	<p><i>Total budgetary price for one (1) helicopter for items and quantities listed in rows from 2.13 to 2.20</i></p>
2.14	<p>- Four (4) per helicopter pairs of protective gloves for the</p>			<p align="center"><i>Optional</i></p>	
2.15	<p>- Four (4) per helicopter safety belts or harness for the hoist/external sling load technicians.</p>			<p align="center"><i>Optional</i></p>	
2.16	<p>- Four (4) per helicopter rescue specialist harness, connected to the hoist.</p>			<p align="center"><i>Optional</i></p>	

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
2.17	One (1) per helicopter rescue triangle with connection elements for lifting of rescued person/patient with the hoist.			Optional	
2.18	One (1) per helicopter stretcher with vacuum mattress for the hoist for 1 patient with equipment for the rescue specialist connecting him to the hoist during lifting up.			Optional	
2.19	- One (1) per helicopter safety harness/belt for rescued person/patient, lifted with the hoist.			Optional	
2.20	- Four (4) per helicopter Protective helmets for a rescue specialist with integrated wireless communication equipment to communicate with the helicopter flight crew			Optional	
3	Training				
3.01	Pilot type-rating course, with theoretical and practical part, with a minimum duration of three weeks, to provide type-rating training in VFR and IFR, to eight (8) pilots of the Contracting Authority – for setting 4 (four) flight crews. The IFR training shall be provided only to pilots with prior experience of flying in such conditions. The flight part of the course shall be with a minimum time of 10 (ten) flight hours for each of the pilots, in accordance with the applicable requirements of EASA Part FCL.	€ 804.700		Optional	Glass Cockpit Course included in the proposed price.
3.02	Engineer/technical training – Four (4) Airframe/Powerplant (B.1.3) specialists, to be able to perform line servicing and troubleshooting. The theoretical and practical parts of the course shall be with a total minimum duration of four (4) weeks. The training shall be provided in an EASA Part 147-approved training organization.	€ 136.500		Optional	

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
3.03	Engineer/technical training – Four (4) Avionics (B.2) specialists, to be able to perform line servicing and troubleshooting. The theoretical and practical parts of the course shall be with a total minimum duration of four (4) weeks. The training shall be provided in an EASA Part 147-approved training organization.	€ 136.500		Optional	
3.04	Instructor pilot course – shall be provided for 1 (one) pilot, who converted to the helicopter type before. The course shall be in accordance with the requirements and rules of the Contractor and EASA, and shall be with a minimum duration of 1 (one) week.	€ 38.000		Optional	
3.05	Hoist and external load operator training course for four (4) operators, with a minimum duration of one week. The course shall be performed in Bulgaria, on the Contracting Authority's helicopter, and with fuel provided by the Contracting Authority. The Contractor shall provide one hoist operation instructor and one pilot-instructor.	€ 199.200		Optional	
3.06	Training of medical crews for operation of the medical equipment.	€ 38.600		Optional	
3.07	The Contractor shall provide on its own account an instructor pilot to the Contracting Authority for additional in-country training after the completion of the type-rating course. This additional training in Bulgaria shall be provided to eight (8) pilots of the Contracting Authority, who completed their type-rating course, under a programme approved by the manufacturer or the regulation authorities. The training shall be carried out in a suitable moment after the helicopter delivery to Bulgaria, including VFR and IFR flights, as applicable.	€ 202.900		Optional	
4	Warranty Support				
4.01	Price for one (1) year of full warranty support (after expiry of the 2-year initial warranty)	€ 126.900		Optional	

№	Specifications	Unit price, for the purchase of two (2) helicopters. Price proposed in EUR €	Unit price, for a purchase under a Framework Agreement for two (2)+five (5) helicopters	Mandatory/ Optional (Unit Price)	Note
4.02	Price for three (3) years of full warranty support (after expiry of the 2-year initial warranty)	€ 680/Fight Hour (*)		Optional	(*) Leonardo offers a maintenance plan based on PBH (Power By Hour) Warranty expiring period. This figure is for reference, not including engine, and may be confirmed with a definitive helicopter configuration elected by customer

Note:

The total Project Budget is BGN 20 000 000 VAT included. (equating to EURO 10 225 837 VAT included, or 8 521 531 VAT excluded).
Upon forming the each line item price, in the 'Note' column it shall me described what part of the line item is already included in the helicopter price and is therefore not provided as an additional price (if applicable)

Превод на български език

№	Спецификации	Цена за 1 брой при закупуване на 2 броя	Цена за 1 брой при рамково споразумение за закупуване на 2+5 броя	Задължително/опционално (цена за 1 брой)	Забележка
1	Technical Requirements				
1.01	<p>Проектът има за цел придобиване на 2 (два) броя новопроизведени хеликоптери за спешна медицинска помощ, транспорт на нуждаещи се пациенти и медицински екипи. Хеликоптерите следва да са снабдени със специализиран медицински интериор на санитарното отделение, медицинско оборудване и апаратура и модерно радиоелектронно оборудване (авионикс), отговарящо на последните изисквания и стандартите на EASA (Европейската агенция за авиационна безопасност), способен да изпълнява пълния спектър задачи, които може да бъдат възложени от Министерството на здравеопазването. Техническите изисквания за хеликоптерите са описани детайлно във файл техническа спецификация</p>	<p>€ 7.977.000 (Цена за 1 бр. хеликоптер)</p>	<p>€ 7.977.000 (Цена за 1 бр. хеликоптер)</p> <p>В случай на потвърден интерес за закупуване на 2+5 хеликоптера, LHD ще предложи намаляване на цената на логистичната поддръжка и събъдържане и на стойността, които ще се определят при финализирането на договора.</p>	Задължително	<p>Единична цена на 1 бр. хеликоптер GrandNew, описан в Анекс-1</p> <p>Конфигурация, параграфи от № 1 до № 4, условия на доставка DAP (INCOTERMS 2010) София, България.</p> <p>Включва планирано техническо обслужване за 300 часа/година или начални 2 години (което се случва първо).</p>
1.02	<p>Провизия (пълна подготовка) за инсталиране на радиостанция от комуникационната система тип TETRA в честотния диапазон 380-400 MHz (радиостанцията се предоставя от Възложителя), включително антена и окабеляване, и нейното интегриране в комуникационната система на хеликоптера.</p>	<p>€ 13.000</p>		Опционално	
1.03	<p>Оборудване за връзка в обществена телекомуникационна мрежа по стандарт GSM, интегрирано в комуникационната система на хеликоптера.</p>	<p>€ 9.900</p>		Опционално	

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1.04	Очила за нощно виждане (NVG) - от 3-то поколение, Class В съгласно стандарт MIL STD-3009	€ 14.200		Опционално	Тази позиция ще бъде доставена (ако се избере) като квалифицирана от компанията, със Сертификат за съответствие
1.05	Провизия за Подвижен фар, с управление от летателния екипаж, снабден с инфрачервен филтър и съвместим с очила за нощно виждане от 3-то поколение.	€ 22.100		Опционално	
1.06	допълнителен резервоар	€ 25.000		Опционално	
1.07	система абсорбираща вибрациите на основната трансмисия.	Не е приложено		Опционално	Тази система не е необходима за AW109 GrandNew
1.08	Подвижен фар с управление от летателния екипаж, снабден с инфрачервен филтър и съвместим с очила за нощно виждане от 3-то поколение.	€ 53.500		Опционално	
1.09	Провизия за Лебедка с товарносимост минимум 230 kg дължина на въжето минимум 70 m.	€ 53.900		Опционално	
1.10	Лебедка с товарносимост минимум 230 kg и дължина на въжето минимум 70 m.	€ 303.000		Опционално	Включва безжична комуникационна система ICS Polysol (UHF), изисквана за операции с човек на външно окачване

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1.11	Провизия за Товарна кука за транспортиране на товар на външно окачване с минимална товароносимост 500 kg. Хеликоптерът да е оборудван с видеокамера или огледало за наблюдение на външния товар.	€ 23.000		Опционално	
1.12	Товарна кука за транспортиране на товар на външно окачване с минимална товароносимост 500 kg. Хеликоптерът да е оборудван с видеокамера или огледало за наблюдение на външния товар.	€ 69.900		Опционално	
1.13	Платформи против затъване в мека почва или сняг, монтиращи се на устройствата за излитане и кацане (плазове или колесник).	€ 180.700		Опционално	
1.14	Противопробонови филтри за входните устройства на двигателите.	€ 89.000		Опционално	
1.15	Ключалки за вратите в пътническата кабина	€ 2.000		Опционално	Монтира се, ако се избере опцията за Товарна кука (позиция 1.12)
2	Общи изисквания				
2.01	1 брой компактна подвижна наземна установка за ел. захранване - запуск и проверки на хеликоптера, със захранване от електрическата мрежа ~220 V.	€ 42.100		Опционално	
2.02	1 комплект колела за придвижване на хеликоптера по земята ако същият е с устройство за излитане и кацане „Skid type“	Не е приложимо		Опционално	Не е приложимо
2.03	1 брой водило за буксиране или платформа за наземен транспорт.	Включено		Опционално	Включена е в предлаганата цена по т. 1.01
2.04	1 комплект столчета за колесника, ако е приложимо при триопорен колесник или спомагателни колела, ако приложимо при използване на плазове.	Включено		Опционално	Включена е в предлаганата цена по т. 1.01

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2.05	1 комплект крикове и възли за закрепване на крикове.	€ 54.100		Опционално	Включена е в предлаганата цена по т. 1.01
2.06	1 комплект покривала за хеликоптера.	Включено		Опционално	
2.07	1 комплект шлангове и приспособления за източване на масло от двигателите, главния и опашните редуктори	€ 12.000		Опционално	
2.08	1 Брой оборудване за източване на горивото от горивния резервоар	€ 19.200		Опционално	
2.09	1 Комплект с инструменти за линейно обслужване на хеликоптера.	€ 140.500		Опционално	
2.10	1 Кабел за външно запазване на санитарното отделение от мрежата ~220 V, с дължина минимум 20 м.	€ 300		Опционално	
2.11	Изпълнителят да достави 1 (един) брой преносим компютър за съхранение/работа с документацията на хеликоптера и снемане/анализ на полетната информация от регистратора на полетната информация и разговорите (FDR/CVR), отговарящ на следните минимални изисквания: – двуядрен процесор с работна честота не по-малко от 2 GHz. - графична видеокарта с не по-малко от 4 GB RAM-памет. - твърд диск с капацитет не по-малък от 500 GB, - оптично устройство за запис DVD-RW Dual Layer. - не по-малко от 3 USB-порта. - монитор с размери не по-малко от 15 инча. - Изпълнителят да осигури за своя сметка и софтуерен продукт за снемане и анализ на полетната информация, съвместим с типа FDR/CVR монтиран на хеликоптера.	€ 10.400		Опционално	
2.12	- 8 (осем) броя на хеликоптер летателни защитни шлемове за пилоти, с възможности за подкачане на очила за нощно виждане, прозрачен защитен визьор и	Включено		Опционално	ЗШ LH 350 „Галет“ с двоен визьор.

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	затъмнени защитен визьор. Размерите ще бъдат предоставени допълнително от Възложителя.				Включени са в предлаганата цена по т. 1.01.
2.13	- 4 (четири) броя на хеликоптер защитни шлемове за борден техник, работещ с лебедката и товара на външно очакване, с възможности за подкачане на очила за нощно виждане, с монтирано оборудване за поддържане на връзка с екипажа на хеликоптера. Размерите ще бъдат предоставени допълнително от Възложителя..			Опционално	
2.14	- 4 (четири) чифта на хеликоптер защитни ръкавици на бордни техници, работещи с лебедката и товара на			Опционално	
2.15	- 4 (четири) чифта на хеликоптер обезопасителни колани или сбури за борден техник, работещ с лебедката и товара на външно очакване.			Опционално	Обща индикативна цена за 1 (един)
2.16	- 4 (четири) броя на хеликоптер обезопасителни колани за спасител, спускащ се с лебедката.	€ 97.100		Опционално	хеликоптер за позициите и количествата описани от т. 2.13 до т.2.20.
2.17	- 1 (един) брой на хеликоптер обезопасителен колан тип спасителен тригълник за спасявано лице/пациент с елементи за закачване към въжето на лебедката.			Опционално	
2.18	- 1 (един) брой на хеликоптер носилка с вакуумен матрак за вдигане на 1 брой спасявано лице с лебедка и спасително оборудване за спасителя, свързващо го с лебедката по време на вдигане.			Опционално	
2.19	- 1 (един) брой на хеликоптер обезопасителен колан за спасяването лице/пациент, вдигано с лебедката.			Опционално	
2.20	- 4 (4) броя на хеликоптер защитни шлемове за спасител с вградено безжично комуникационно оборудване за връзка с екипажа на хеликоптера			Опционално	
3	Обучения				
3.01	Курс за приучване (type-rating), с теоретична и практическа част, с минимална продължителност три	€ 804.700		Опционално	Включен е и курс за

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	седмици – до ниво VFR (полети при визуални правила) и IFR (полети при правила по прибори) за 8 (осем) броя пилоти на Възложителя – за комплектуване на 4 екипажа. Обучение до ниво IFR да се предостави само на пилоти, които имат предварителен опит за полети в подобни условия. Летателната част от курса да е в минимален обем от 10 (десет) летателни часа за всеки от пилотите и да е съобразена с приложимите изисквания на правилата за обучение на EASA – Part FCL.				запознаване с Glass Cockpit.
3.02	Обучение на 4 (четири) броя инженери/техници по специалност „Планер и Двигател“ (B1.3.), до ниво линейно обслужване и отстраняване на откази на старта, при теоретичен и практически курс с минимална продължителност 4 (четири) седмици. Обучението да проведе в център, одобрен по правилата EASA Part 147.	€ 136.500		Опционално	
3.03	Обучение на 4 (четири) броя инженери/техници по специалност „Авионикс“ (B2), до ниво линейно обслужване и отстраняване на откази на старта, при теоретичен и практически курс с минимална продължителност 4 (четири) седмици. Обучението да проведе в център, одобрен по правилата EASA Part 147.	€ 136.500		Опционално	
3.04	Курс за инструктор пилот – да се предостави за 1 (един) брой пилот, преминал преди това курса за приучване на типа хеликоптер. Курсът да съответства на изискванията и правилата на Изпълнителя и EASA, и да има минимална продължителност от една седмица.	€ 38.000		Опционално	
3.05	Обучение на оператор за работа с оборудването за външно окачване и лебедка – за 4 (четири) броя специалисти, с минимална продължителност една седмица. Курсът се провежда в България, на хеликоптера на Възложителя и с гориво на Възложителя, и за неговото провеждане Изпълнителя да предостави един инструктор за работа с лебедка и един пилот-инструктор.	€ 199.200		Опционално	

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3.06	Обучение на медицински екипи за работа с медицинското оборудване.	€ 38.600		Опционално	
3.07	Изпълнителят да предостави за своя сметка един свой пилот-инструктор на разположение на Възложителя за изпълнение на допълнително обучение след завършване на курса на приучване. Това допълнително обучение в България да се осигури за 8 (осем) пилота на Изпълнителя завършили курса за приучване, съгласно утвърдена от производителя или съответния регулатор програма. Обучението да се проведе в подходящ момент за Възложителя след доставката на хеликоптера в България, като включва полети VFR/IFR, както е приложимо.	€ 202.900		Опционално	
4	Гаранционна поддръжка				
4.01	Цена на година за пълно гаранционно обслужване (след изтичане на двугодишния период на гаранционна поддръжка)	€ 126.900		Опционално	
4.02	Цена за пълно гаранционно обслужване в рамките на 3 години (след изтичане на двугодишния период на гаранционна поддръжка)	€ 680/пролятия час (*)		Опционално	(*) Leonardo предлага план за техническо обслужване, базиран на концепцията „РВН (Power By Hour) – заплащане на пролетан час, след изтичане на гаранционния срок. Това число е само за информация, и изключва

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					поддръжката на двигателя и може да се потвърди само след като е известна конфигурацията на хеликоптера, избрана от Възложителя.

Note:

Забележка: Общата стойност на проекта е 20 000 000 лв с ДДС EURO 10 225 837 VAT included, or 8 521 531 VAT excluded).

При формиране на всяка цена в графата забележка следва да се опише каква част от параметъра се поема в рамките на доставката и не се ценообразува допълнително (ако е приложимо)

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LEONARDO HELICOPTERS BUDGETARY PROPOSAL TO THE MINISTRY OF HEALTH OF BULGARIA FOR THE SUPPLY OF TWO (2) AW109 GRANDNEW HEMS AND RELATED SERVICES

ANNEX 3

LETTER

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