

# **BOLD AVENGER 2007**

## **Public Information Cell**



### **Fact Sheet**

#### **Sea King ASW/Search and Rescue Helicopter, United Kingdom**

The Sea King helicopter is manufactured by AgustaWestland in the UK. Development started in the late 1950s under licence from Sikorsky. Westland initially developed the S-61 as an anti-submarine warfare helicopter (or Helicopter Anti-Submarine, HAS) for the UK Royal Navy. Sea King is also operational as a search-and-rescue (SAR) and airborne early-warning (AEW) helicopter.

Sea King has been in service for more than 25 years, and more than 300 are in service with the Royal Navy, the Royal Air Force, with the navies of Australia, Egypt, Germany, India and Pakistan, and the airforces of Belgium, Egypt, Norway and Qatar.

#### **WEAPONS**

The helicopter can carry four torpedoes, either ATK (formerly Alliant Techsystems) Mark 46, Whitehead A244S or BAE SYSTEMS Sting Ray torpedoes. It can also be armed with four Mark 11 depth charges. The helicopter can carry two anti-ship missiles, either Sea Eagle or Exocet. Sea Eagle from MBDA (formerly Matra BAe Dynamics, UK) is an all-weather, fire-and-forget, sea-skimming anti-ship missile, with a range of 100km. Guidance is by inertial navigation system with active radar homing. Sea Eagle is carried by British and Indian Navy Sea Kings. The AM39 Exocet anti-ship missile by MBDA (formerly Aerospatiale Matra) is carried by the Pakistan Navy Sea Kings. The missile has inertial guidance with active radar homing.

#### **ENGINES**

The helicopter is powered by two Rolls Royce Gnome H1400-1T turboshaft engines, which provide 2,700 shaft horsepower. The six flexible bag fuel tanks hold 3,700 litres of fuel, which gives the helicopter a range of 1,500km. For long-range operation, an auxiliary fuel tank can be fitted internally to extend the ferry range to 1,750km.

#### **ANTI SUBMARINE WARFARE**

The ASW helicopter is equipped with two Type 4 marine markers, two Mark 2 smoke floats and mini-sonobuoys supplied by Ultra Electronics. BAE SYSTEMS Type 2069 sonar with an AQS-902G-DS acoustic signal processor provides the capability to carry out dipping sonar operations to a depth of 700ft. The magnetic anomaly detector is the AN/ASQ-504(V) AIMS supplied by CAE Electronics. The Thales Defence Super Searcher radar is installed on the Mark 6 fleet of Sea Kings built for the UK Fleet Air Arm. The helicopter is also equipped with the Joint Tactical Information Distribution System (JTIDS) terminal IDS-2000 from Rockwell Collins. The helicopter's navigation systems include Thales Defence Doppler 71 navigation radar, Honeywell AN/APN-171 radar altimeter and Mark 31 Automatic Flight Control System from Smiths Newmark.

#### **SEARCH AND RESCUE**

The search and rescue helicopters are equipped with an hydraulic hoist rated at 600lb. The radar is either the Thales Defence ARI5955 or Telephonics RDR-1500B. The Norwegian Air Force Sea King is also equipped with the Telephonics RDR-1300C nose radar. AgustaWestland were awarded a contract in 1995 to build three new Mark 3A Search and Rescue helicopters and to upgrade the Royal Air Force Mark 3 fleet to Mark 3A standards. The new systems include Thales Defence ARI 5955/2 radar, Thales Defence RNAV-2 navigation system, Thales Defence Doppler 91 and Cossor STR2000 Global Positioning System. With the helicopter configured in the search-and-rescue role, the cabin can accommodate up to 22 survivors or nine stretchers and two medical officers.

UK Royal Air Force Search and Rescue Sea Kings are being fitted with the FLIR Systems Sea King Multi-Sensor Systems (SKMSS). The system entered service in June 2004 and will equip the entire RAF Sea King fleet by 2006.

### **AIRBORNE SURVEILLANCE AND AREA CONTROL (ASAC)**

The 13 Royal Navy airborne early warning AEW.2 helicopters are being upgraded to AEW.7 standard with the Thales Defence Searchwater 2000 radar and Cerberus mission system. The helicopters' designation has been changed to Airborne Surveillance and Area Control (ASaC Mk 7). The Searchwater 2000 radar processing system incorporates a new pulse Doppler mode and Link 16 JTIDS (Joint Tactical Information Distribution System) datalink. The upgrade programme also includes the installation of an additional HaveQuick II secure radio communications system together with an AN/APX-113(V) interrogator transponder from Hazeltine and a video recorder unit. The first two upgraded Sea Kings were delivered in May 2002 and the programme is scheduled for completion in 2005. ASaC Mk 7 helicopters were deployed for the first time onboard HMS Ark Royal as part of Operation Iraqi Freedom in March 2003. Two helicopters were lost in a mid-air collision during the conflict and, in May 2005, Thales UK was awarded a contract for the conversion of two RN Sea King HAS Mk 6 ASW helicopters to ASaC Mk 7 configuration.

### **TACTICAL TROOP TRANSPORT AND LOGISTIC SUPPORT**

This variant has a cabin with large sliding access doors for transporting bulky loads. Large loads up to 8,000lb (3,692kg) can be carried underslung. The cabin can be equipped with seats for 28 fully equipped troops

### **Specifications - Sea King ASW/Search and Rescue Helicopter, United Kingdom**

#### **Dimensions**

Overall Length with Rotors Turning	22.15 Metres
Fuselage Length	17.02 Metres
Length with Rotor Blades and Tail Folded	14.40 Metres
Height	5.13 Metres
Diameter Main Rotor	18.9 Metres
Diameter Tail Rotor	3.16 Metres

#### **Weight**

Maximum Take-off Weight	9,750 Kg
Antisubmarine Has Helicopter	7,300 Kg
Airborne Early Warning AEW Helicopter	7,400 Kg
Search and Rescue SAR Helicopter	6,000 Kg

#### **Performance**

Vne Never Exceed Speed	270 Km/Hour
Cruise Speed	200 Km/Hour
Maximum Vertical Rate Of Climb	240 Metres/Minute
Range	1,480 Km
Range With Auxiliary Fuel	1,740 Km

**Royal Air Force Sea King Mark3A**

Racal Ari 5955/2 Lightweight Radar  
Racal Navigation System RNAV-2  
Racal Doppler 91  
Global Positioning System Cossor STR2000  
Bendix/King Kdm 706A  
Bendix/King Kdf 806  
Night Vision Goggles Compatible Lighting  
Smiths Newmark Afcs SN500  
Main Gear Box Emergency Lubrication System,  
ELS

**Royal Australian Navy Sea King Mark 50**

Racal Ari 5955/2 Lightweight Radar  
Racal Navigation System RNS252  
Racal Doppler 91  
Adf Bendix/King Kdf 806A  
Tacan AN/Arn 118

**Belgian Air Force Sea King Mark 48B**

Radar Bendix Rdr 1500B  
Racal Navigation System RNS252  
Flir Systems Inc Flir 2000F  
Racal Navigation System RNS252  
Global Positioning System (GPS) Canadian  
Marconi CMA3012  
Main Gear Box Emergency Lubrication System  
(ELS)

**Norwegian Air Force Sea King Mark 43B**

Telephonics Radar Rdr 1500b Dorsal Mounted  
Telephonics Radar Rdr 1300 Nose Mounted  
Flir Systems Inc Flir 2000F  
Dual Vdu Screens With Switchable Displays  
Cockpit Screen Displays For RDR1300 Or FLIR  
Racal Doppler 91  
Racal Navigation System RNAV-2  
Main Gearbox Emergency Lubrication System,  
ELS

