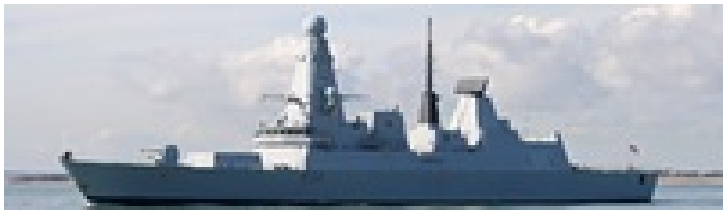
D 32 Daring [Type 45 Batch 1] - 2011

United Kingdom



Type: DDG - Guided Missile Destroyer
Max Speed: 28 kt
Commissioned: 2011
Length: 152.4 m
Beam: 21.2 m
Draft: 7.4 m
Crew: 190
Displacement: 7450 t
Displacement Full: 8000 t
Propulsion: 2x Wärtsilä 12V200 Diesels, 2x Rolls-Royce WR-21 Gas Turbines, CODOG

Sensors / EW:
- Type 1045 Sampson MFR - Radar, Radar, Air Search, 3D Long-Range, Max range: 398.2 km
- Type 2091 [MFS 7000] - Hull Sonar, Active/Passive, Hull Sonar, Active/Passive Search & Track, Max range: 29.6 km
- Type 1047 - (LPI) Radar, Radar, Surface Search & Navigation, Max range: 88.9 km
- UAT-2.0 Sceptre XL - (Upgraded, Type 45) ESM, ELINT, Max range: 926 km
- IRAS [CCD] - (Group, IR Alerting System) Visual, LLTV, Target Search, Slaved Tracking and Identification, Max range: 185.2 km
- IRAS [IR] - (Group, IR Alerting System) Infrared, Infrared, Target Search, Slaved Tracking and Identification Camera, Max range: 185.2 km
- IRAS [Laser Rangefinder] - (Group, IR Alerting System) Laser Rangefinder, Laser Rangefinder, Max range: 0 km
- Type 1046 VSR/LRR [S.1850M, BMD Mod] - (RAN-40S, RAT-31DL, SMART-L Derivative) Radar, Radar, Air Search, 3D Long-Range, Max range: 2000.2 km
- Radamec 2500 [EO] - (RAN-40S, RAT-31DL, SMART-L Derivative) Visual, Visual, Weapon Director & Target Search, Tracking and Identification TV Camera, Max range: 55.6 km
- Radamec 2500 [IR] - (RAN-40S, RAT-31DL, SMART-L Derivative) Infrared, Infrared, Weapon Director & Target Search, Tracking and Identification Camera, Max range: 55.6 km
- Radamec 2500 [Laser Rangefinder] - (RAN-40S, RAT-31DL, SMART-L Derivative) Laser Rangefinder, Laser Rangefinder for Weapon Director, Max range: 7.4 km
- Type 1048 - (LPI) Radar, Radar, Surface Search w/ OTH, Max range: 185.2 km

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Weapons / Loadouts:
- Aster 30 PAAMS [GWS.45 Sea Viper] - Guided Weapon. Air Max: 111.1 km.
- Aster 15 PAAMS [GWS.45 Sea Viper] - Guided Weapon. Air Max: 37 km.
- 114mm/55 Mk8 HE(MP)ER HE - Gun. Air Max: 2.8 km. Surface Max: 22.2 km. Land Max: 22.2 km.
- 30mm/75 DS30B Mk1 APDS Burst [20 rnds] - Gun. Air Max: 1.9 km. Surface Max: 2.8 km. Land Max: 2.8 km.

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- 30mm/75 DS30B Mk1 HE Burst [20 rnds] - Gun. Air Max: 1.9 km. Surface Max: 2.8 km. Land Max: 2.8 km.
- Mk216 Sea Gnat Chaff [Distraction] - (1988) Decoy (Expendable). Surface Max: 1.9 km.
- Mk245A2 TALOS Flare - (2000) Decoy (Expendable). Surface Max: 1.9 km.
- Mk214 Sea Gnat Chaff [Seduction] - (1987) Decoy (Expendable). Surface Max: 1.9 km.
- Mk251 Siren Active Decoy Round - (2004) Decoy (Expendable). Surface Max: 1.9 km.
- Type 2170 Sea Sentor SSTD - (2006) Decoy (Expendable). Surface Max: 1.9 km.
- CONTRALTO-V [SLAT] - (Torpedo Decoy, Ship) Decoy (Expendable). Surface Max: 1.9 km.
- FDS-3 Floating Decoy - (2006, Mk59) Decoy (Expendable). Surface Max: 1.9 km.

OVERVIEW: The Type 45 destroyer, also known as the D or Daring-class, is an advanced class of guided missile destroyers built for the United Kingdom's Royal Navy. The class is primarily designed for anti-aircraft and anti-missile warfare and is built around the PAAMS (Sea Viper) air-defence system utilizing the SAMPSON AESA and the S1850M long-range radars. The first three destroyers were assembled by BAE Systems Surface Fleet Solutions from partially prefabricated "blocks" built at different shipyards, the remaining three were built by BAE Systems Surface Ships. The first ship in the Daring class, HMS Daring, was launched on 1 February 2006 and commissioned on 23 July 2009.

The Type 45 destroyers were built to replace the Type 42 destroyers that had served during the Falklands War, with the last Type 42 being decommissioned in 2013. The National Audit Office reported that, during an "intensive attack", a single Type 45 could simultaneously track, engage and destroy more targets than five Type 42 destroyers operating together. After the launch of Daring on 1 February 2006 Admiral Sir Alan West, a former First Sea Lord, stated that it would be the Royal Navy's most capable destroyer ever, as well as the world's best air-defence ship. The reduction in the number to be procured from twelve, then to eight and eventually down to six (in 2008) was controversial.

DETAILS: The Type 45 destroyers are 152.4 m (500 ft) in length, with a beam of 21.2 m (70 ft) and a draught of 7.4 m. (24.3 ft) This makes them significantly larger than the Type 42 they replace, displacing approximately 8,500 tonnes compared to 5,200 tonnes of the Type 42. BAE Systems is the Design Authority for the Type 45, a role traditionally held by the UK Ministry of Defence. The design of the Type 45 brings new levels of radar signature reduction to the Royal Navy. Deck equipment and life rafts are concealed behind the ship's superstructure panels, producing a very "clean" superstructure somewhat similar to the French La Fayette-class frigates. The mast is also sparingly equipped externally. Speculation by the press suggests that this design gives the ship the radar signature of a small fishing boat.

The Type 45 destroyers are primarily designed for anti-air warfare with the capability to defend against sophisticated targets such as fighter aircraft, drones as well as highly maneuverable sea skimming anti-ship missiles travelling at supersonic speeds. The Royal Navy describes the destroyers' mission as being "to shield the Fleet from air attack".

The Type 45 destroyer is equipped with the sophisticated Sea Viper (PAAMS) air-defence system utilizing the SAMPSON active electronically scanned array multi-function radar and the S1850M long-range radar. The PAAMS system is able to track over 2,000 targets and simultaneously control and coordinate multiple missiles in the air at once, allowing a large number of tracks to be intercepted and destroyed at any given time. This makes the PAAMS system particularly difficult to swamp during a saturation attack, even against supersonic targets. The US Naval War College has suggested that the SAMPSON radar is capable of tracking 1,000 objects the size of a cricket ball travelling at three times the speed of sound (Mach 3), emphasising the system's capabilities against high performance stealth targets.

A core component of the PAAMS air-defence system is the Aster missile, composing of the Aster 15 and Aster 30. MBDA describe Aster as a "hit-to-kill" anti-missile missile capable of intercepting all types of high performance air threats at a maximum range of 120 km. The Aster missile is autonomously guided and equipped with an active RF seeker enabling it to cope with "saturated attacks" thanks to a "multiple engagement capability" and a "high rate of fire".

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Presently the Daring-class destroyers are equipped with a 48-cell A50 Sylver Vertical Launching System allowing for a mix of up-to 48 Aster 15 and 30 missiles. However, the Type 45 destroyer was designed to accommodate a total of 64-cells, while some reports suggest a total of 72-cells.

TYPE: Guided Missile Destroyer.

SPECIFICATIONS: Displacement: 8,000 to 8,500 t (8,400 long tons; 9,400 short tons) || Length: 152.4 m (500 ft 0 in) || Beam: 21.2 m (69 ft 7 in) || Draught: 7.4 m (24 ft 3 in) || Propulsion: (2) shafts integrated electric propulsion (IEP), (2) Rolls-Royce WR-21 gas turbines, 21.5 MW (28,800 shp) each, (2) Wartsila 12V200 diesel generators, 2 MW (2,700 shp) each, (2) Converteam electric motors, 20 MW (27,000 shp) each || Complement: (191) with accommodation for up to (235).

PERFORMANCE: Max Speed: In excess of 30 kn (56 km/h; 35 mph) || Range: In excess of 7,000 nautical miles (13,000 km) at 18 kn (33 km/h).

SENSORS: SAMPSON multi-function air tracking radar (Type 1045) || S1850M 3-D air surveillance radar (Type 1046) || Raytheon Integrated Bridge and Navigation Syste, Raytheon AHRS INS (MINS 2), Raytheon I-band Radar (Type 1047) || Raytheon E/F-band Radar (Type 1048) || Ultra Electronics Series 2500 Electro-Optical Gun Control System (EOGCS) || Ultra Electronics SML Technologies radar tracking system || Ultra Electronics/EDO MFS-7000 sonar || UAT Mod 2.0 (2.1 planned) || AN/SSQ-130 Ship Signal Exploitation Equipment (SSEE) Increment F cryptologic exploitation system || Seagnat || Naval Decoy IDS300 || Surface Ship Torpedo Defence.

ARMAMENT: Sea Viper air defence system || (1) 48-cell Sylver A50 VLS, Aster 15 missiles (range 1.7-30 km), Aster 30 missiles (range 3-120 km) || (2) quad Harpoon launchers || (1) BAE 4.5 inch Mk 8 naval gun || (2) Oerlikon 30 mm guns || (2) Phalanx CIWS || (2) Miniguns || (6) General purpose machine guns.

AIRCRAFT: (1-2) Lynx HMA8 || (1) Westland Merlin HM1.

SHIPS BUILT: Daring (D32) || Dauntless (D33) || Diamond (D34) || Dragon (D35) || Defender (D36) || Duncan (D37).

SOURCE: [SCO] Wikipedia http://en.wikipedia.org