

A Look Inside HMS Queen Elizabeth

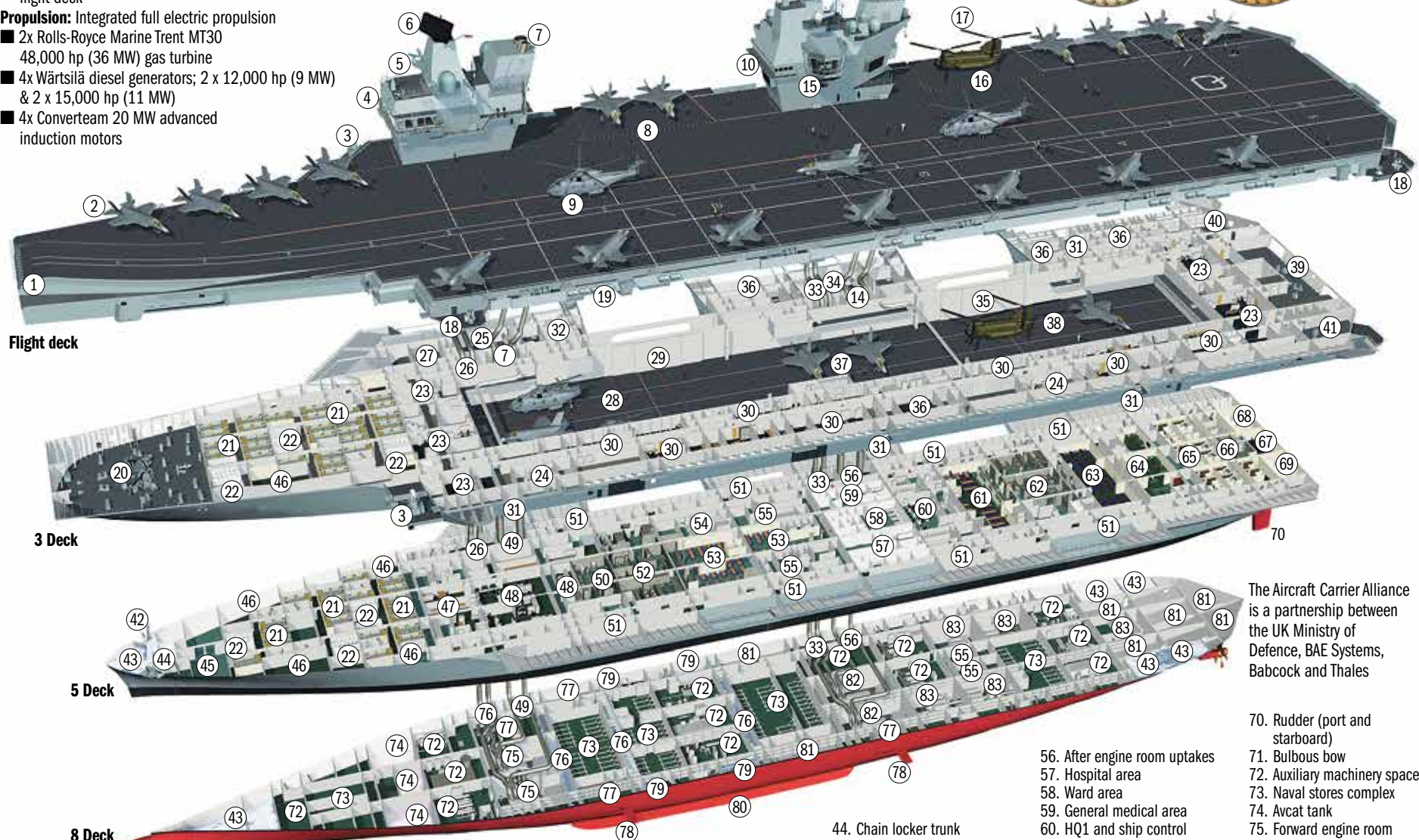


Sixteen years after deciding to build two large-deck aircraft carriers, Queen Elizabeth II will name the first of the two giant ships on July 4 at a ceremony at the shipyard in Rosyth, Scotland, where both ships are built by the Aircraft Carrier Alliance, a consortium of companies including BAE Systems, Thales and Babcock Marine. Queen Elizabeth will be the largest warship ever built in Britain and one of the largest conventional aircraft carriers ever produced. Work will continue on it until it is handed over to the Royal Navy in early 2017.

Once in service it will operate Lockheed Martin F-35B Lightning II fighters – to be operated jointly by the Fleet Air Arm and the Royal Air Force – Navy helicopters like the Merlin and the Wildcat as well as British Army Chinook cargo and Apache attack helicopters. The second carrier, Prince of Wales, is already under construction and is to be commissioned in 2020, although it remains undecided whether both carriers will be operated simultaneously.

Displacement: 72,100 tons
(65,400 metric tonnes or 64,370 long tons)
Length: 920 ft (280 m)
Beam: 128 ft (39 m) (waterline), 230 ft (70 m) overall
Draft: 36 ft (11 m)
Decks: 170,000 sq ft (16,000 m²) 9 decks beneath flight deck
Propulsion: Integrated full electric propulsion
■ 2x Rolls-Royce Marine Trent MT30
48,000 hp (36 MW) gas turbine
■ 4x Wärtsilä diesel generators; 2 x 12,000 hp (9 MW)
& 2 x 15,000 hp (11 MW)
■ 4x Converteam 20 MW advanced induction motors

Speed: More than 25 knots (46 km/h; 29 mph)
Range: 10,000 nautical miles (19,000 km; 12,000 mi)
Embarked Personnel: 921
Complement: 679 ships crew, not including air element — berths for up to 1,600
Aircraft: Up to 50



The Aircraft Carrier Alliance is a partnership between the UK Ministry of Defence, BAE Systems, Babcock and Thales

1. Aviation store
2. F-35B Lightning II
3. Phalanx automated close-in weapon system
4. Forward island bridge
5. Navigation radar
6. Long-range radar
7. Forward engine and gas turbine uptakes
8. Forward aircraft lift
9. Merlin helicopter

10. After island emergency conning bridge
11. Mainmast
12. Medium-range radar
13. Communications outfit
14. After engine room and gas turbine uptakes
15. Flying control position
16. After aircraft lift
17. Chinook helicopter
18. Automatic small caliber gun
19. Inflatable life-raft stowage

20. Forward mooring deck
21. Junior rates six-berth cabin
22. Junior rates showers and toilets
23. Ship's office complex
24. Pyrolysis compartment
25. Forward gas turbine space
26. Forward engine down-takes
27. Fire protection system
28. Hangar forward bay
29. Forward hangar doors
30. Air squadron complex
31. Mass evacuation system

32. RN police officer and cells
33. After engine downtakes
34. After gas turbine space
35. After hangar doors
36. Air filtration units
37. Hangar mid bay
38. Hangar aft bay
39. Aft mooring deck
40. Starboard mooring deck
41. Port mooring deck
42. Anchor (port and starboard)
43. Water ballast compartment

44. Chain locker trunk
45. Gym
46. Junior rates recreation space
47. Mission systems office
48. Mission systems complex
49. Forward engine room uptakes
50. Bakery
51. Pipe passage
52. Junior rates gallery
53. Junior rates dining hall
54. NAAFI canteen spaces
55. Low voltage distribution compartment

56. After engine room uptakes
57. Hospital area
58. Ward area
59. General medical area
60. HQ1 and ship control center
61. Senior rates dining hall
62. Officers and senior rates gallery
63. Wardroom
64. Wardroom annex
65. Head of department cabins
66. Flag and commanding officers gallery
67. Flag officer and commanding officers dining room
68. Commanding officer's suite
69. Flag officer's suite

70. Rudder (port and starboard)
71. Bulbous bow
72. Auxiliary machinery space
73. Naval stores complex
74. Avcat tank
75. Forward engine room
76. Fresh water tanks
77. Stabilizer compartment (port and starboard)
78. Stabilizer (port and starboard)
79. Heel correction tank (port and starboard)
80. Bilge keel
81. Void
82. After engine room
83. Propulsion motor compartment
84. Propeller (port and starboard)

Gerald R. Ford (US)
Displacement: 110,000 tons
Length: 1,106 feet
Beam: 256 feet
Speed: 30-plus knots

Liaoning (China)
Displacement: 59,100 tons
Length: 999 feet
Beam: 246 feet
Speed: 32 knots

HMS Queen Elizabeth (UK)
Displacement: 72,000 tons
Length: 920 feet
Beam: 73 meters
Speed: 25 knots

Charles DeGaulle (France)
Displacement: 46,300 tons
Length: 858 feet
Beam: 211 feet
Speed: 27 knots

HMS Illustrious (UK)
Displacement: 24,250 tons
Length: 636 feet
Beam: 118 feet
Speed: 30 knots

Note: Carrier displacements are given in US short tons.

SOURCES: AIRCRAFT CARRIER ALLIANCE, ROYAL NAVY AND DEFENSE NEWS RESEARCH

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