

# Heavy metal on the high seas

Earlier this month, the US debuted its most powerful new aircraft carrier, the USS Gerald R. Ford, described by President Donald Trump as a "100,000-ton message to the world". The American behemoth joins oceans already teeming with ships featuring big decks and fast jets. Here's how they stack up.

## USS Gerald R. Ford aircraft carrier

**Propulsion**  
2 nuclear reactors, 4 shafts  
Each reactor is capable of producing 300MW of electricity.

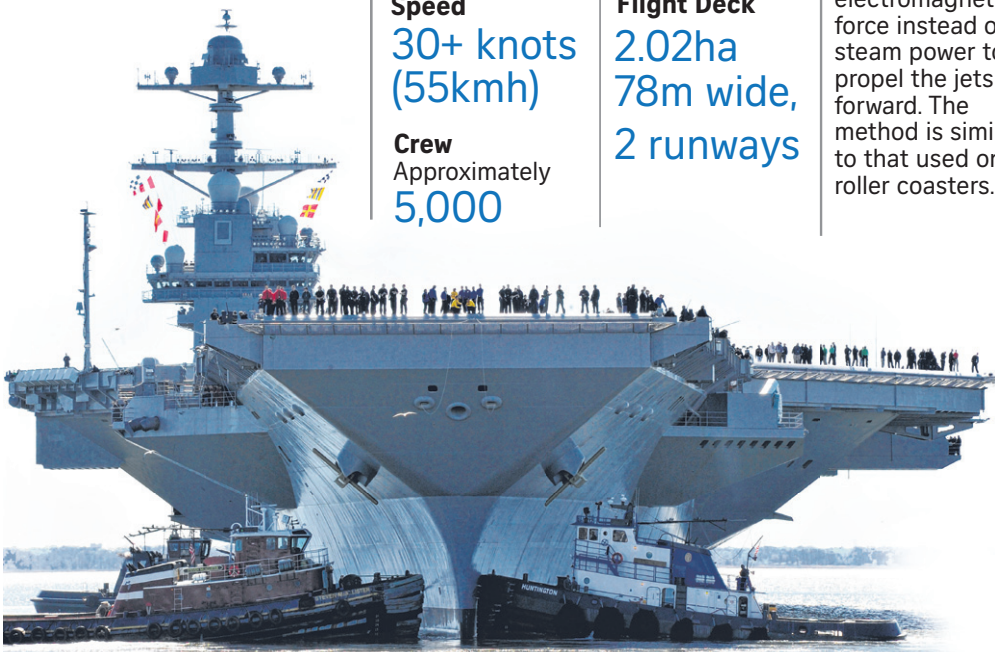
**Maximum displacement**  
100,000 tons  
As much as 400 Statues of Liberty

**Speed**  
30+ knots (55kmh)

**Crew**  
Approximately 5,000

**Flight Deck**  
2.02ha  
78m wide,  
2 runways

**Aircraft capacity**  
75+  
Capable of 220 air strikes a day – one almost every six minutes – because the deck uses electromagnetic force instead of steam power to propel the jets forward. The method is similar to that used on roller coasters.



## Liaoning China V16 aircraft carrier

**Propulsion**  
Diesel propulsion

Conventionally powered, the vessel is built with eight boilers and four steam turbines, each producing 50,000hp.

**Maximum displacement**  
65,000 tons

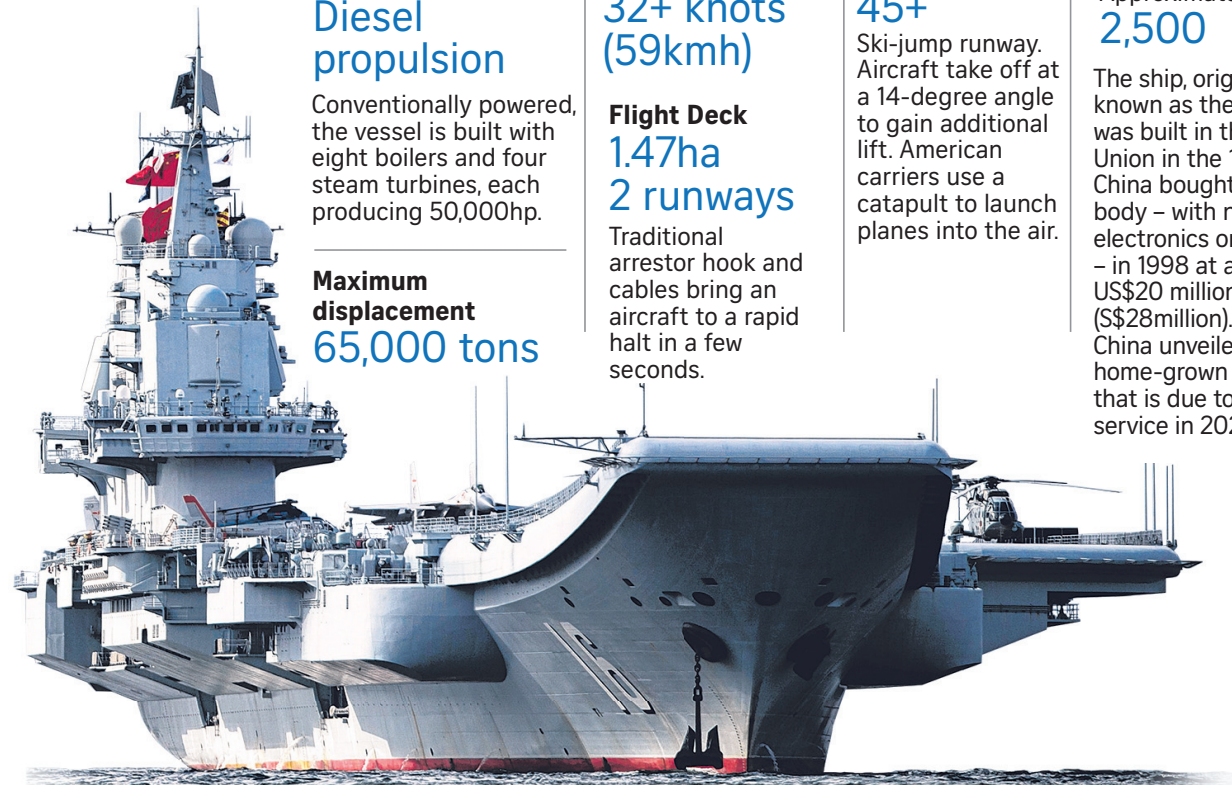
**Speed**  
32+ knots (59kmh)

**Flight Deck**  
1.47ha  
2 runways

Traditional arrestor hook and cables bring an aircraft to a rapid halt in a few seconds.

**Aircraft capacity**  
45+  
Ski-jump runway. Aircraft take off at a 14-degree angle to gain additional lift. American carriers use a catapult to launch planes into the air.

**Crew**  
Approximately 2,500  
The ship, originally known as the Varyag, was built in the Soviet Union in the 1980s. China bought the main body – with no engine, electronics or propeller – in 1998 at a cost of US\$20 million (S\$28million). In April, China unveiled its first home-grown carrier that is due to go into service in 2020.



## How they compare

Length in metres

300m

200m

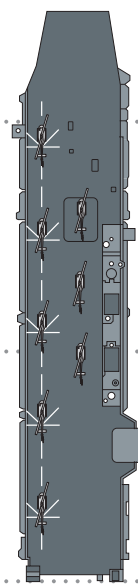
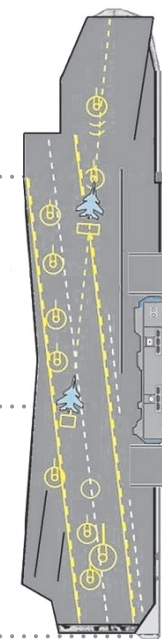
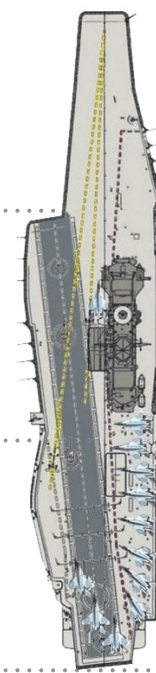
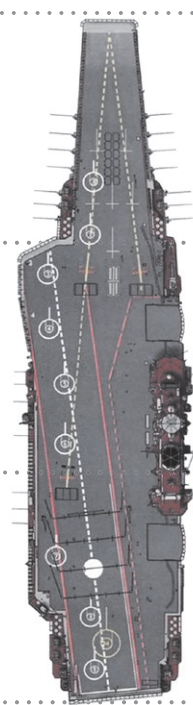
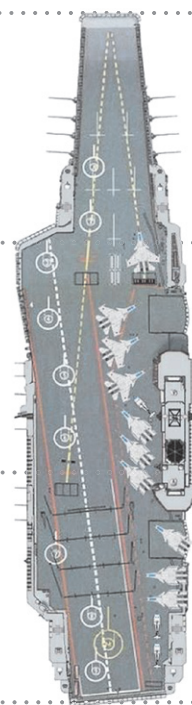
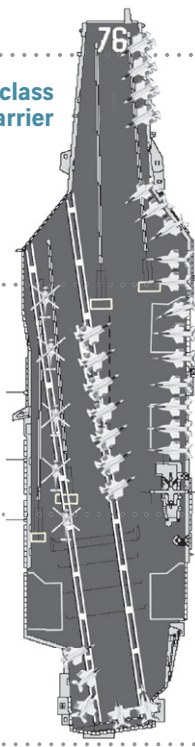
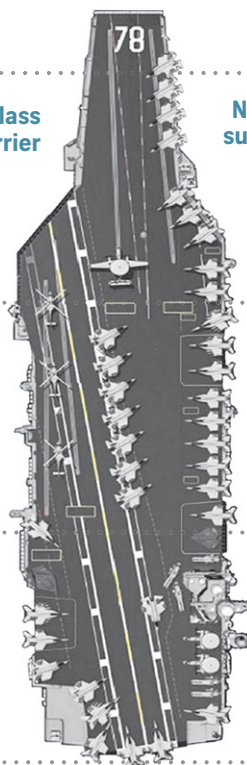
100m

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Ford class super carrier

Nimitz class super carrier

New York's Statue of Liberty  
93m



Carrier name:	USS Gerald R. Ford	USS Ronald Reagan	Liaoning	Admiral Kuznetsov	INS Vikramaditya	INS Vikrant	ROKS Dokdo	JS Kaga
Country:	US	US	China	Russia	India	India	South Korea	Japan
Maximum displacement:	100,000 tons	97,000 tons	65,000 tons	65,000 tons	45,000 tons	40,000 tons	18,800 tons	27,000 tons
Carrying capacity:	75+ aircraft	90 aircraft	50 aircraft	50 aircraft	30 aircraft	30 aircraft	15 aircraft	28 aircraft
Type:	Nuclear aircraft carrier	Nuclear aircraft carrier	Conventional aircraft carrier	Conventional aircraft carrier	Conventional aircraft carrier	Conventional aircraft carrier	Helicopter carrier	Helicopter carrier

Catapult-assisted take-off, barrier-assisted recovery

Short take-off, barrier-assisted recovery

Short take-off and landing