

Paddle frigates (540-650 nhp)

DESCARTES (540 nhp, launched 1844)

VAUBAN (540 nhp, launched 1845)

MOGADOR (650 nhp, launched 1848)

DESCARTES paddle frigate

Displacement:	3037t
Dimensions:	230ft 1in wl, 231ft 2in deck x 40ft 8in mld, 41ft 6in ext x 18ft 7in mean, 19ft 7in max. Depth 16ft 11in
Same, meters:	<u>70.14, 70.45 x 12.40, 12.65 x 5.67, 5.97m. 5.15m</u>
Machinery:	540nhp (Rontgen, Fijenoord). Side-lever, 1200ihp
Hull material:	Wood
Armament:	(2.1840) GD 18-30p No.2, 2-22cm shell forward; SD 14-16cm shell, 2-22cm shell. (6.1840) As <u>Vauban</u> . (1845 and 1856) GD 6-30p No.1, 2-22cm No.1 shell; SD 6-22cm No.1 shell, 2-30p No.1. (5.1859) GD 12-30p No.1; SD 8-22cm shell
Complement:	304

<u>Name</u>	<u>Builder</u>	<u>Laid down</u>	<u>Launched</u>	<u>Compl.</u>	<u>Fate</u>
DESCARTES	Rochefort	11.2.40	5.3.44	5.45	Stk. 15.7.67

Class. In 11.39 the navy ordered a set of 450nhp engines in England to serve as a model for large paddle frigate machinery to be built in France. A hull for these engines was ordered on 7.12.39 under the name Gomer. Hubert designed the ship with a beam and depth of hull very close to those of sail third-class frigates, although the length had to be much greater in order to accomodate the engines. His plans were approved in 2.40. The original engines and name were reassigned to a smaller hull on 27.2.41 (see the Gomer class, below), the original hull was renamed Descartes, and new, larger engines were ordered for it from a Dutch firm in 10.41. Unlike her half-sister Vauban, Descartes received traditional side-lever engines. Her beam outside her paddle boxes was 65ft 7in and her sail area was 2140 sq.yd.

Disposal. Descartes was BU 1867.

VAUBAN paddle frigate

Displacement:	2873t
Dimensions:	229ft 6in wl, 231ft 4in deck x 41ft 0in mld, 41ft 11in ext x 18ft 3in mean
Same, meters:	<u>69.94, 70.50 x 12.50, 12.77 x 5.55m</u>

Machinery:	540nhp (Rontgen, Fijenoord). Inclined direct, 1313ihp, 9.5kts. Coal 565t
Hull material:	Wood
Armament:	(6.1840) GD 18-30p No.2, 2-22cm shell; SD 10-16cm shell, 2-22cm shell. (1847) GD 6-30p No.1, 2-22cm No.2 shell; SD 6-22cm No.2 shell, 2-30p No.1.
Complement:	304

<u>Name</u>	<u>Builder</u>	<u>Laid down</u>	<u>Launched</u>	<u>Compl.</u>	<u>Fate</u>
VAUBAN	Lorient	10.7.40	8.3.45	2.46	Stk. 8.6.65

Class. On 29.8.39 the minister decided to have Indret build a set of engines of 450nhp on an experimental French plan. A hull for these engines was ordered on 7.12.39 under the name Asmodée. The navy soon decided that the Indret design was too daring and in 5.40 ordered a duplicate of Gomer's engines in England instead. While in England to place the order, the ship's designer, Boucher, learned that the hull of Hubert's ship was heavier than its English equivalents. Boucher's plans, approved in 6.40, had a hull 140t lighter than Hubert's and slightly finer lines but retained the cross-section dimensions of a third-class frigate. Hulls and engines were reallocated on 27.2.41 as in the case of Descartes, the original hull of Asmodée becoming Vauban. Her new engines, ordered in 10.41, were an early form of direct-acting engines in which the cylinders were inclined to permit their direct connection with the paddle shaft. They worked well, but were as bulky as conventional side-lever engines and were not duplicated. The beam of Vauban outside her paddle boxes was 65ft 7in.

Disposal. Vauban was sunk by an experimental spar torpedo at Toulon 28.2.66.

Two 540nhp paddle frigates were scheduled to be begun in 1844, Tamerlan at Rochefort and Godefroi at Lorient. They were deferred on 28.10.44. Had they been built, the navy would have taken advantage of new technology to raise their engine power to 700 or 800nhp.

MOGADOR paddle frigate

Displacement:	As <u>Gomer</u>
Dimensions:	As <u>Gomer</u>
Machinery:	650nhp (Schneider). Oscillating cylinders, direct, tubular boilers, 1695ihp, 10kts sustained. Coal 630t
Hull material:	Wood
Armament:	(1847) GD 12-30p No.1; SD 4-22cm shell
Complement:	305

<u>Name</u>	<u>Builder</u>	<u>Laid down</u>	<u>Launched</u>	<u>Commiss.</u>	<u>Fate</u>
MOGADOR	Rochefort	16.11.40	19.2.48	22.8.48	Stk. 20.4.78

Class. This ship was hull number 11 in the first group of packets begun in 1840, and her hull was identical to the Gomer class. Originally named Monge, she was renamed 28.11.44. At the same time, the navy decided to exploit new engine technology to give her machinery substantially more power than in her half-sisters. Her original engines were reassigned to the smaller Caffarelli and new 650nhp engines were ordered for her in 8.46. These were built on one of the most successful patterns of direct drive paddle engines, popularized by the English engine builder Penn, in which the cylinders were mounted on trunnions and oscillated as their connecting rods drove the paddle shaft. On a trial run on 17.8.49, she averaged 9.82kts from Toulon to Algiers and 10.25kts on the return trip. Indret and some other leading French engine builders made extensive use of this type of machinery after abandoning the traditional side-lever engines. The beam of Mogador outside her paddle boxes was 66ft 4in.

Disposal. Mogador was BU 1880 at Toulon.