

BARBOX 80 FPSO



Company	KBR Upstream Oil & Gas Production Group
Design	BARBOX 80 FPSO - Floating Production Facility (FPF)
Purpose	Low-cost FPSO
Type	Floating/moored
Areas	Worldwide
Depth	60m (197ft) minimum

Description

To date, floating production systems have been mainly based on a semi-submersible or a ship-shaped vessel; neither of these is ideal, each having disadvantages.

The semi-submersible does not have onboard storage and relies entirely on an attendant FSO. Whilst the ship-based option, often a tanker conversion, has the storage, it is sensitive to the weight and height of the topsides equipment. This can be an issue in terms of ensuring good stability of the vessel. In addition, the ship cannot be moored in a fixed position in harsh environments, having to weathervane around its mooring point to cope with the prevailing winds and seas, which requires an expensive turret and swivel stack for fluids transfer. BARBOX 80 has been designed to eliminate these problems and provide a safe and cost-effective solution. It is based on a simple, stable, box-like structure that is easy to fabricate; is capable of supporting large deck payloads whilst providing the storage capacity of a ship, yet with the motions of a semi-submersible.

Due to its design, BARBOX 80 does not require a turret or swivel stack; risers are routed through a moonpool or external to the hull.

Extensive model testing has been undertaken demonstrating that BARBOX 80 is suitable for use worldwide and is equally at home in the hostile environment of the North Sea or the benign waters of the Middle and Far East.

A passive or an active mooring system is utilised, depending on water depth. The simple mooring configuration enables lines to be pre-laid and the entire system can be installed without the need for expensive installation vessels. The design of the moorings permits the deployment of a variety of off-loading methods - hose reel or trough, floating hose, submerged hose with buoy, or off-loading buoy. The hull of BARBOX 80 has been optimised to minimise pitch and roll amplitudes and accelerations, traditionally crucial in the design of FPSO process systems. As well as being used as a stand-alone facility, BARBOX 80 can be bridge-linked to a fixed structure such as a wellhead platform, or can accommodate its own drilling derrick.

Capacities and dimensions:

Hull:	70m x 70m
Depth:	40m
Draft:	24m
Displacement:	112,000t
Deck area:	4500m ²
Accommodation:	80
Process equipment:	10,000t
Crude storage:	550,000bbl
Oil throughput:	Up to 100,000bbl/day

Contact KBR Upstream Oil & Gas Production Group