

Case Study 132: **Fast Interceptor Craft (FIC)**

SPECIFICATIONS

Waterjet:	DJ170HP x2
Engine:	CAT C18 ACERT 847 bkW @ 2300 rpm
Gearbox:	ZF 550 1.237:1
Vessel:	18.13m L.O.A 14.2m LWL 22.0 tonne (laden)
Performance:	45 knots (laden) 48 knots (light)



A Jewel from Sapphire Marine – 18m High Speed Monohull

Launched in March 2011, this 18.0m Fast Interceptor Craft (FIC) has been built by Sapphire Marine in Oman. It is powered by twin CAT 847 bkW diesel engine coupled to the **DOEN DJ170HP** waterjets. Designed for high-speed patrol and interception activities this vessel has seating for six and forward accommodation and sleeping for the crew.

The **DJ170HP** is a 17" (432mm) single stage compact high performance waterjet that uses Doen's latest impeller technology that delivers mixed flow type, high-speed performance, within an axial build. This approach combines the key benefits of excellent high-speed efficiency with superior cavitation margins and efficiency at lower speeds and cruise conditions. This waterjet model incorporates many innovative features that enhance its application into high-speed craft such as the lightweight fabricated intake tunnel, providing scope for design customization and efficiency optimisation

Steering is by conventional helm using a power assisted hydraulic steering system. Inboard cylinders are mechanically connected to the waterjets inboard steering tiller. This provides the vessel with exceptional and easy control at all speeds, especially for pursuit and high-speed maneuvers. A simple mechanical tie bar is used to connect the waterjets providing synchronized steering at all times.

The **DJ170HP** waterjets are fitted with Doen's Rotary Servo Control (RSC) unit; which is a mechanical follow up hydraulic control system providing simple and exact control of the waterjets reverse buckets. The fully integrated hydraulic system uses jet mounted hydraulic pumps, in built oil cooling and completely inboard mounted reverse cylinders and hydraulic lines. Operation is by conventional marine control levers using push pull cables operate this system.