

'Akuna IV'

A self-righting, "break through" pilot boat from Hart Marine for Port Phillip



Built by Victoria's Hart Marine for Port Phillip Sea Pilots, 'Akuna IV' was delivered on June 30.

The composite-hulled vessel, designed by Pantocarene Naval Architects, France, has an overall length of 18.55 metres with a length at waterline of 17.4 metres, a beam of 6.14 metres, a draught of 1.55 metres and a depth of 2.3 metres.

Displacing 30 tonnes, the vessel is powered by twin Cummins QSK19-M engines, each rated at 597kW at 2,100rpm, with power transferred via twin ZF 2050A, remote mounted, 2.029:1 reduction gears driving twin Teignbridge propellers.

The pilot boat has a maximum speed of 30 knots and a cruising speed of 26 knots.

Some of the significant elements of this design include its self-righting ability, the NIBS fender system, a "Beak Bow" to reduce pitching, a suspended wheelhouse with

consequent reductions in noise and vibration resulting in reduced fatigue on pilots and crew, greater efficiency and less emissions, a composite construction which in turn brings both thermal and acoustic efficiency and lower maintenance costs over the lifecycle of the vessel when compared with other materials and a high standard of finish for pilot and crew comfort.

Hart Marine was able to enhance this design with additional engineering features such as five-bladed propellers, which reduce both underwater noise and cavitation, remote mounted gearboxes which enhance performance without more power while reducing noise and vibration and high strength castings for underwater appendages to reduce drag and cavitation, thus reducing the required power output.

Further, according to Hart Marine, Cummins Engines are the leaders in IMD Tier II Emission control and their ability to easily service these engines adds further value to the vessel.

Hart Marine is primarily a custom boat builder, working at the exotic end of the material spectrum, usually working on a variety of projects from naval/commercial craft in Malaysia, hovercraft for Singapore or self-righting pilot boats for some of the most extreme areas in Australia.

Hart Marine has been operating since 1983 and is recognised both locally and overseas as an Australian icon within the composite boat building industry.

The company has built over 150 boats and has worked well over two million man-hours building composite structures. With approximately 40 permanent staff, Hart Marine is one of the most experienced and best-equipped advanced composite boat yards in the world. The team is well versed in the needs of its clients, with global experience and a commitment to safety, environment and community through the Hart Marine SEC (Safety, Environment and Community) Policy.

Hart Marine currently has a further ORC 14.3 pilot boat on order.

For further information contact: Hart Marine, Victoria.

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'Akuna IV'

SPECIFICATIONS

Type of vessel:	Pilot boat
In survey to:	NSCV/VSL
Home port:	Queenscliff, Victoria
Owner/operator:	Port Phillip Sea Pilots, Victoria
Designer:	Pantocarene Naval Architects, France
CAD software:	MAXSURF/POWERCADD
Builder:	Hart Marine, Victoria
Construction material:	E-glass/epoxy
Length overall:	18.55 metres
Length waterline:	17.4 metres
Beam:	6.14 metres
Draught:	1.55 metres
Depth:	2.3 metres
Displacement:	30 tonnes
Main engines:	2 x Cummins QSK19-M, each 597kW at 2,100rpm
Gearboxes:	2 x ZF 2050A, remote mounted, 2.029:1
Propellers:	2 x Teignbridge, five-bladed
Maximum speed:	30 knots
Cruising speed:	26 knots
Hydraulic equipment:	Air Valve Engineering
Electronics supplied by:	Olectric Systems
Radar:	Furuno 4kW
Depth sounder:	Furuno
Radio:	Sailor VHF
GPS:	Furuno
Plotters:	Furuno NavNet 30
AIS:	Furuno
Winches:	Muir
Capstan:	Muir
Other deck equipment:	Hydraulic MOB recovery platform
Paints/coatings:	Jotun / International Paint
Windows:	G James / A1 Windscreens
Safety equipment:	RFD
Lifeboat:	Zodiac, 10-person
Fuel capacity:	3,000 litres
Fuel consumption:	140 litres / hour at 23 knots
Freshwater capacity:	100 litres
Crew:	2
Passengers:	8 pilots