



AVXX CONTROLS


HamiltonJet

The Ultimate in
Waterjet Sophistication

FORWARD-THINKING VESSEL CONTROLS

With knowledge honed over three decades selling and supporting electronic control systems, we've set the benchmark in vessel controls across the globe.

AVX and AVX EXPRESS are our next generation of electronic controls and our platform for an increasingly connected future. AVX is suitable for larger vessels, while AVX EXPRESS is designed with smaller vessels in mind.

Our AVX platform is thoughtfully designed, robust and reliable. It is redefining the operator experience and delivering you mission-critical confidence, even in the toughest conditions. It is also future-ready, underpinning our skipper assistance and autonomous solutions, which are taking vessel performance, control, and safety to new levels.

Thoughtful Design. Robust and Reliable. Future Ready.



Mouseboat/3-Axis Controller



SIMRAD

SIMRAD AP50
09/15/08

- STBY
- AUTO
- NAV SETUP
- WORK
- INFO
- DODGE TURN

- Alarm
- J-1
- In-Antenna
- ENTER
- BACKUP
- ACTIVE
- POWER
- LOGICAL
- GAUGE

THOUGHTFUL DESIGN

Around the world, over 1,700 vessels are using HamiltonJet electronic controls.

This deep experience has been foundational to the design of AVX technology - our most intuitive control system yet.

Bespoken Functionality

The AVX platform is a modular system that can be cost effectively scaled for large or small vessels to meet your requirements.

AVX can be configured with two to six control stations and drive two to six waterjets. AVX EXPRESS can be configured for two control stations and two waterjets.

With either system you can choose from our range of steering options – full helm, mini-helm, steering joystick, tiller or Mouseboat/3-Axis controller.

With so much power in a modern vessel, we know smooth, progressive control is essential. AVX technology offers seamless management of engine RPM and reverse deflector deployment with either combined or separate levers.

Information On Demand

Both AVX and AVX EXPRESS give you access to the information you need, when you need it.

The screen display provides immediate feedback on system status and presents a range of critical information, options and system settings.

Streamlined Installation

AVX and AVX EXPRESS fully integrate with a wide variety of common third party systems such as autopilots and voyage data recorders.

Compact and lightweight, the platform delivers high performance without excessive use of console space.

It also comes with clearly labelled cabling and fitted with top quality Swiss plug-in connectors for quick installation. Power is supplied via a dual connection to the battery banks.

ROBUST & RELIABLE

Our uncompromising standards put durability and reliability at the heart of everything we do. Our products work as hard as the vessels they power.



IP67 Waterproofing

Built to endure the toughest conditions, the control modules use IP67-rated sealing for waterproofing, with extensive shock and vibration tolerance. Many units are potted with an encapsulation to seal the electronics from the environment entirely.

Swiss-made LEMO Connectors are used throughout for robust networking.

Dual Redundancy

Built-in fault-tolerance and a fully dual-redundant architecture ensure operators can keep using the main controls in the unlikely event of an issue. There is also an entirely separate, independent backup system per jet.

Tried and Tested

AVX technology has undergone extensive testing to ensure it is fit for purpose in the toughest environments. Tests include salt spray, ingress protection, electromagnetic compatibility, impact, UV and endurance.

During design every unit has been subject to extreme temperature and vibration testing in our industry leading HALT/HASS chamber, pictured to the right. (HALT/HASS stands for Highly Accelerated Life Testing/Highly Accelerated Stress Screening).

Since its introduction, the AVX platform has been proven in dozens of vessels, from rescue boats to fast ferries.

Class Approval

AVX is type approved to DNV and has been designed to meet the rigorous standards of most other class approval bodies.

(Note, AVX EXPRESS is not class approved).



HamiltonJet's HALT/HASS Facility, Christchurch, New Zealand

FUTURE READY

Our mission is to continually optimise performance, efficiency and safety through innovation. The AVX platform is our control system for the future. It enables the seamless integration of skipper assistance, autonomous, electrification and digitalisation technologies.

JETanchor - Positioning System

The hero of our AVX-based technologies is JETanchor*. This is hands-free technology at its very best. JETanchor has two operational modes that simplify the job of holding station in open water:

Virtual Anchor mode – which sets a virtual anchor point around which the boat will ‘swing’ with the prevailing conditions. In this mode the boat naturally settles into the most comfortable and fuel-efficient heading.

Station Keeping mode – which automatically holds a vessel’s position and heading, giving a high degree of positional accuracy.

Precision Manoeuvring – JETanchor can also be used (with caution) near other vessels and fixed objects.

Station Keeping will hold position around the dock but the real magic happens when you start to move the vessel with the controller. The system continues to use built-in GPS to deliver pinpoint accurate manoeuvring, automatically compensating for prevailing wind and tide.

Once the controller is released the boat is brought to a halt and returns to Station Keeping mode, eliminating any further vessel drift.

JETsense - Intelligent Voyage Control

JETsense, in collaboration with Sea Machines' autonomous technology, sets a new bar in navigational guidance, moving waterjet-powered vessels to the forefront of 21st century navigation and utility.

A 3-in-1 system featuring navigation, multi-sensor fusion and computer vision, it is helm-based enabling it to advise, safeguard or assume active control of open water vessel transits.

JETsense utilises Artificial Intelligence (AI) and advanced autonomy to perceive the domain, maintain precise control of steering and speed during a voyage and re-route to avoid traffic and obstacles, while enabling a new level of streaming data to improve on-water operations.

JETlink - Autonomous & Remote-Control Interface

JETlink provides a standardised interface too modern, automated, and remote-control systems. It uses a proprietary CAN protocol to allow external systems to command the drivetrain and perform most of the functions of an on-board skipper. The link is made through a compact on-board interface box.

Class Approved Dynamic Positioning Interface (DPI)

This additional AVX-enabled smart system allows high-end dynamic positioning systems to command our waterjets. Control is delivered at an individual propulsion line level, allowing class-approval up to DP3.

Enquire for availability.

*When operating JETanchor and JETsense, the operator must remain at the helm to ensure the safety of the vessel and crew.

TO TAKE ON THE WORLD AND WIN, WHAT YOU NEED MOST IS CONFIDENCE IN YOUR SYSTEMS

With AVX and AVX EXPRESS, you can have absolute confidence the AVX system best suited to your vessel will deliver mission-critical confidence every time you need it to.

AVX

AVX is intuitive vessel control for larger vessels.

Standard Features:

- Available for two-six waterjets.
- Available for two-six stations.
- Multiple helm devices.
- Multiple three-axis manoeuvring devices.
- Available with separate backup units.
- Jeroom mounted Propulsion Control (PCU) and Local Control (LCU).
- Multiple schema configurations – dependent on application.
- Class approved.

AVX EXPRESS

Fundamentally, AVX EXPRESS is the same as AVX, just optimised for smaller vessels.

Standard Features:

- Available for one-two waterjets.
- Available for one-two stations.
- Two helm devices per station (max).
- Two three-axis manoeuvring devices per station (max).
- AVX EXPRESS backup available on Screen Display (SDU).
- Jet or Transom mounted CCU (no local control).
- Four standard schema configurations.
- No class approval available.



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WHALE WATCH KAIKŪRA

NZ 142273

ONLY

CASE STUDY

Windfarm Support Vessel Iceni Revenge

Turner Iceni Marine Services provide fast and dependable transport and logistics support to the offshore wind industry. Our waterjets and control systems allow Iceni vessels to undertake missions reliably and safely in the challenging North Sea conditions.

After acquiring a used vessel, Turner Iceni asked HamiltonJet to replace the competitor waterjets with a pair of our brand new HM651 waterjets to improve reliability and performance. Iceni have many HamiltonJet powered vessels, but Revenge is their first to be equipped with AVX and JETAnchor.

“The JETAnchor system proved its worth in one job with a lot of standby work, which meant being a safety vessel at an oil and gas installation. We were able to use the Virtual Anchor and save the crews a lot of work. They were very thankful after the five day job being able to use Virtual Anchor as opposed to dodging all day”

Richard Thurlow, Director Turner Iceni.

VESSEL SPECIFICATIONS

Service: Crew transfer vessel

Location: United Kingdom

Length: 23.3 metres

Builder: Diverse Marine

Owner: Turner Iceni, UK

HamiltonJet: AVX controls, with JETAnchor and twin HM651 waterjets





CASE STUDY

Long Beach Pilot

Long Beach is the second busiest seaport in the United States, with more than 16,600 twenty-foot containers arriving every day. Jacobsen Pilot Service is responsible for bringing them all in safely.

Jacobsen is building a sister ship to their latest boat Orion (pictured). This vessel will be equipped with AVX, incorporating six control stations to give flexibility to operate the boat safely in all conditions.

NEW VESSEL SPECIFICATIONS

Service: Pilot Boat

Location: California, USA

Length: 19.27 metres

Designer: Tim Nolan Design, USA

Builder: Nordlund, Boat Builders

Owner: Jacobsen Pilot Service, USA

HamiltonJet: AVX controls
and twin HM521 waterjets



CASE STUDY

Offshore Workboat Grovfjord

Completed in 2019, this purpose-built workboat operates up and down the coast of Norway, working right up to the Arctic Circle. Even at these elevated latitudes, our JETAnchor system provides accurate Station Keeping. The builder was amazed by how simple AVX was to install and the advanced capabilities of the system.

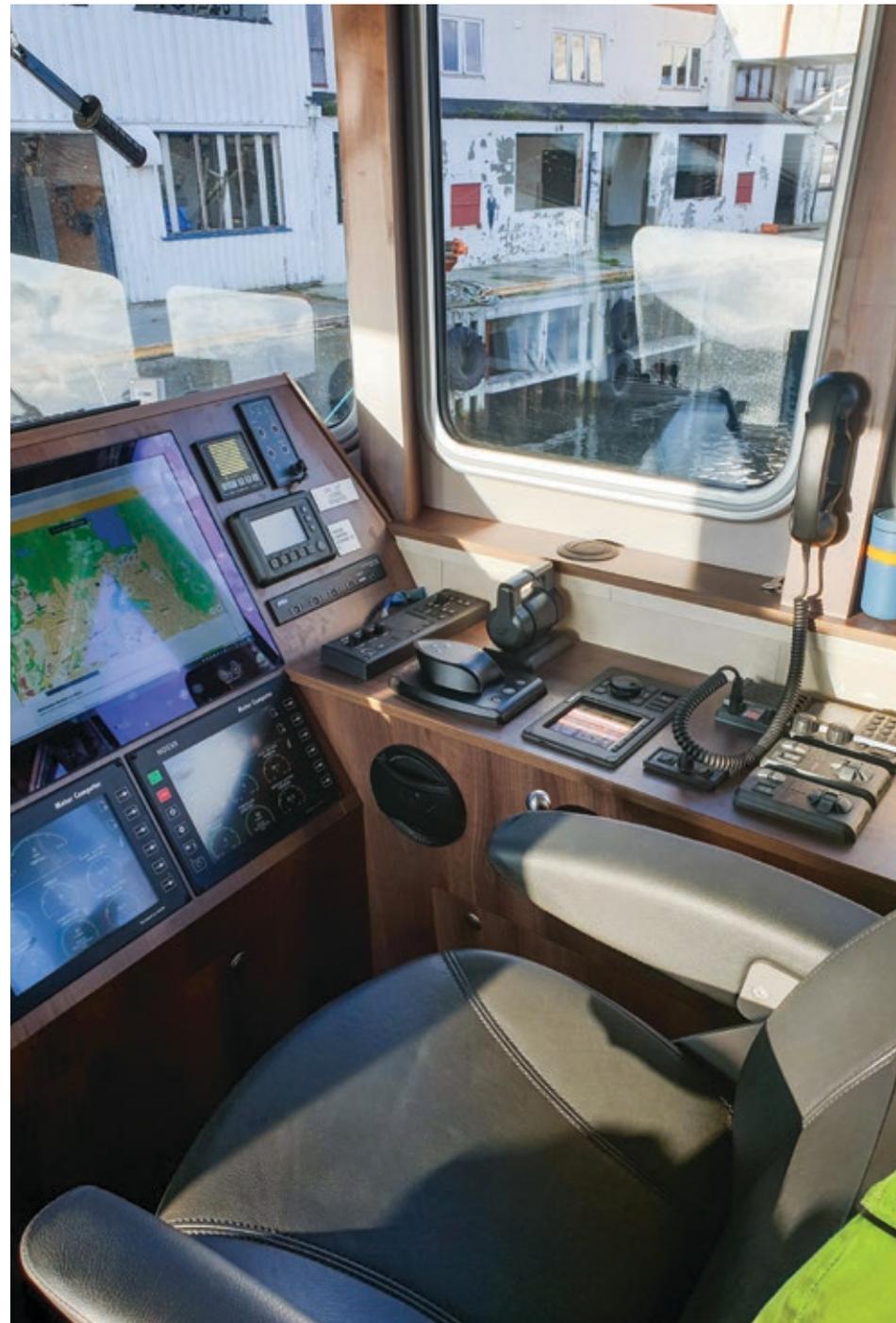
“Our customer was extremely impressed with the capability of AVX and in particular JETAnchor. The system delivers results that would normally only be achieved with a much larger and more expensive full DP system, which is not practical on a boat of this size. This has enabled our customer the ability to significantly increase their productivity and safety whilst performing complex operations.”

Thomas Smefjell,
Builder

VESSEL SPECIFICATIONS

Service: Multipurpose geo-surveying and drilling vessel
Location: Norway
Length: 15m
Builder: Grovfjord Mek Verksted (GMV)
Owner: Multiconsult

HamiltonJet: AVX, with JETAnchor, and twin HM521 waterjets





CASE STUDY

ARES Patrol Boat

HJX29 will power 122 patrol boats for the Turkish Coastguard border control fleet.

The project will see each of the 12-metre Fibreglass Reinforced Plastic [FRP] and carbon composite boats equipped with twin HJX29 waterjets controlled by blueARROW.

HamiltonJet's Istanbul-based distributor Nemomarin is running the project with ARES Shipyard in Antalya. The build started in late 2020.

“The project represents the largest volume serial production in Turkey's shipbuilding history, and it will certainly put a significant record in the world's shipbuilding archives as well. The project is planned to last five years and will involve construction and delivery of 122-ARES 35 FPB boats to meet the needs of the Turkish Coastguard. We will deliver six boats every two months based on our production programme.” Utku Alanc, CEO of ARES Shipyard.

VESSEL SPECIFICATIONS

Service: Patrol vessels

Location: Turkey

Length: 12 metres

Builder: ARES Shipyard

Owner: Turkish Coastguard

HamiltonJet: Twin HJX29 waterjets
and blueARROW controls

WORLD-CLASS PRODUCT SUPPORT

We are backed by more than 70 years in business as the pioneer and market leader in waterjets and controls.

Our product support and parts availability is truly class-leading. With a global network of regional offices and over 50 appointed distributors, help is always on hand. No matter where you are, in the unlikely event of a problem, downtime is minimised.

Our products all come with a commitment to at least 20 years' support after the end of series production*.

*This applies to all HamiltonJet products which reach series production and can be extended longer if a particular project requires it. Beyond this point, we still endeavour to keep you moving where possible.









WORK WITH US

Over the decades we've become trusted partners to boat builders, naval architects and marine operators around the globe. They tell our story better than we do, so if you'd like some references, please get in touch.

Our network is global. Wherever you are, you'll find experienced distributors supported by our own regional office staff to assist you with your project. We'll walk you through the process and can deliver simple or complex projects.

Our market experience is extensive. It covers offshore, pilot, rescue, fire, military, patrol, windfarm, fast ferry, fishing, aquaculture and recreational applications.

HamiltonJet Global Headquarters:

PO Box 709
Christchurch, 8140
NEW ZEALAND
P: 0064 3 962 0530
E: marketing@hamiltonjet.nz
www.hamiltonjet.com

HamiltonJet Regional Offices:

Americas

14680 NE North
Woodinville Way
Suite 100, Woodinville
WA 98072
UNITED STATES
OF AMERICA
P: 001425 527 3000
or 800 423 3509
E: marketing@hamiltonjet.com

EMEA

Unit 26, The Birches
Industrial Estate
East Grinstead,
West Sussex RH19 1XZ
UNITED KINGDOM
P: 00441342 313 437
E: marketing@hamiltonjet.uk

Asia

1 Toh Tuck Link
#04-01
SINGAPORE 596222
P: 0065 65672202
E: marketing@hamiltonjet.sg

