



# AVXX CONTROLS

  
**HamiltonJet**

The Ultimate in  
Waterjet Sophistication



# ADVANCED VESSEL CONTROLS

AVX is our next generation of vessel controls and our platform for an increasingly connected future.

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

To take on the world and win, what you need most is confidence in your systems.

Thoughtfully designed, robust and reliable, AVX redefines the operator experience, delivering mission-critical confidence, even in the toughest conditions.

AVX is also future-ready. It underpins 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





# THOUGHTFUL DESIGN

There are over 1,500 vessels using HamiltonJet electronic controls around the world. This deep experience has been foundational to the design of AVX - our most intuitive control system yet.

## Bespoke Functionality

AVX is a modular system that can be cost effectively scaled for small or large vessels to meet your requirements. It can be configured with up to six control stations and drive up to six waterjets.

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 offers seamless management of engine RPM and reverse deflector deployment with either combined or separate levers.

## Information On Demand

AVX gives 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 fully-integrates with a wide variety of common third-party systems such as autopilots and voyage data-recorders.

Compact and lightweight, it 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 dual connections 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 Water-proofing

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 epoxy resin to seal the electronics from the environment entirely.

Swiss-made Limo 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 per-jet backup system.



## Tried and Tested

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

## Class Approved

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





# FUTURE READY

Our mission is to continually optimise performance, efficiency and safety through innovation. AVX 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) in close proximity to 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 Mouseboat. The system continues to use built-in GPS to deliver pinpoint accurate manoeuvring, automatically compensating for prevailing wind and tide.

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

\*When operating in any of the JETanchor modes, the operator must remain at the helm to ensure the safety of the vessel and crew.

**AVX also enables these skipper assistance and autonomous solutions from HamiltonJet (enquire for availability):**

### Class Approved Dynamic Positioning Interface (DPI)

Enables high-end dynamic positioning systems to command our jets. Control is delivered at an individual propulsion line level, allowing class-approval up to DP3.

### JETlink - Autonomous and Remote Control Interface

Provides a standardised interface to 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.





#### 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 next vessel will be equipped with AVX, incorporating six control stations to give flexibility to operate the boat safely in all conditions.

### 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 GMV GeoCat

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.”*

Bård Mek Hansen,  
Managing Director of GMV.

#### 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



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# WORLD-CLASS PRODUCT SUPPORT

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

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**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.







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# WORK WITH US

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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.

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