HAMILTONJET – USV READY

HSBO, GOTHENBURG 2021

HamiltonJet

HamiltonJet

1954

The pioneer of the modern waterjet in 1954

Solely waterjet manufacturers since the 1980's. Family owned.

All in house production

All R&D and manufacturing done in house.

Based in Christchurch New Zealand

Jets from 80-7,500 hp

23 models of water jets.

From 210mm to 1,200 mm in diameter. Advanced electronic control systems for all jets.

The worlds #1 waterjet

More jets in operation than any other manufacturer.

Backed up with a professional global support network of distributors.

HamiltonJet

TRUSTED GLOBALLY

Over

50%

of the global waterjet population

Trusted globally by

63

Navies worldwide

HamiltonJet

TRUSTED GLOBALLY

HamiltonJet

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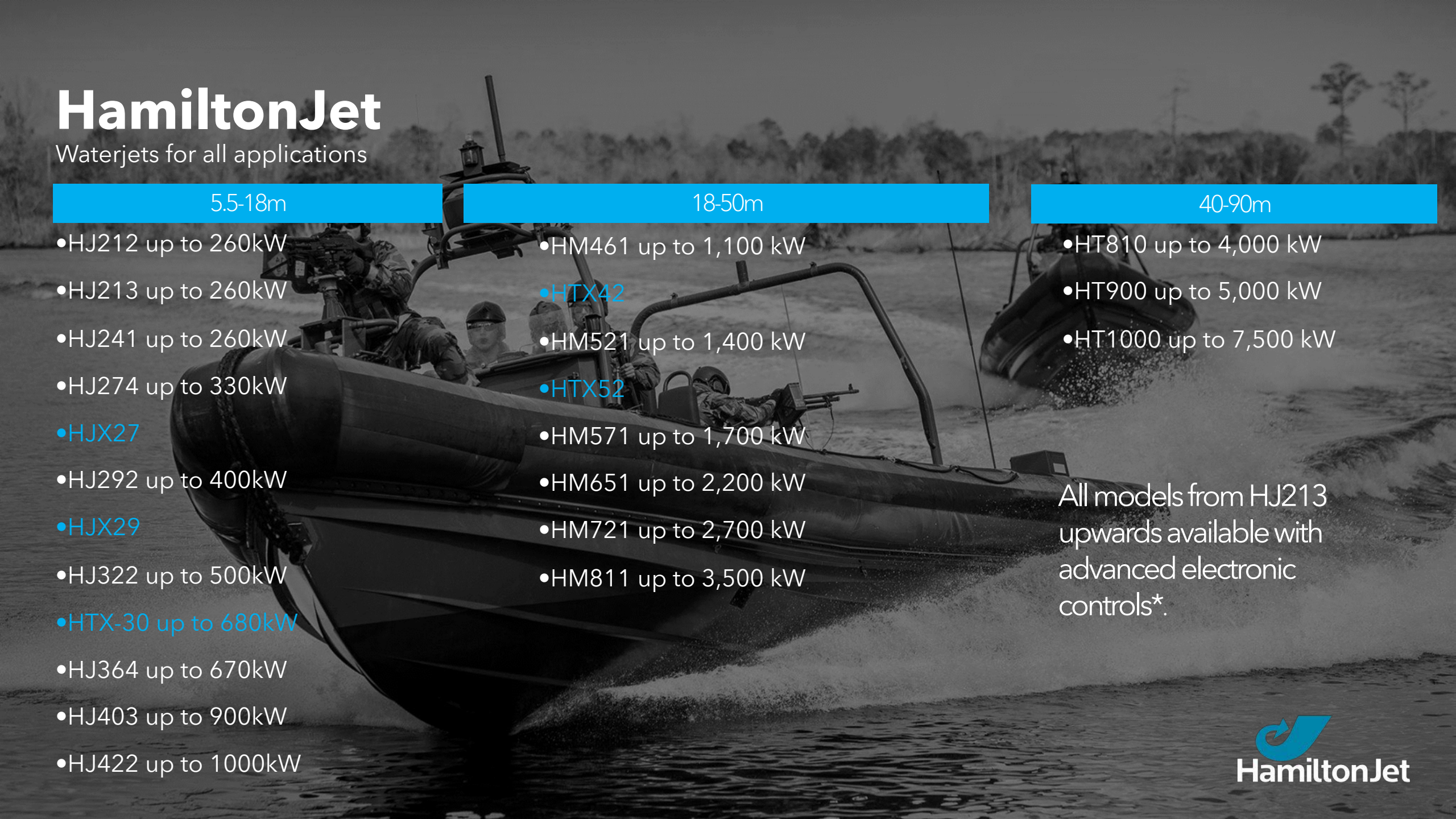
Waterjets for all applications



5.5-18m	18-50m	40-90m
•HJ212 up to 260kW	•HM461 up to 1,100 kW	•HT810 up to 4,000 kW
•HJ213 up to 260kW	•HTX42	•HT900 up to 5,000 kW
•HJ241 up to 260kW	•HM521 up to 1,400 kW	•HT1000 up to 7,500 kW
•HJ274 up to 330kW	•HTX52	
•HJX27	•HM571 up to 1,700 kW	
•HJ292 up to 400kW	•HM651 up to 2,200 kW	
•HJX29	•HM721 up to 2,700 kW	
•HJ322 up to 500kW	•HM811 up to 3,500 kW	
•HTX-30 up to 680kW		
•HJ364 up to 670kW		
•HJ403 up to 900kW		
•HJ422 up to 1000kW		

All models from HJ213 upwards available with advanced electronic controls*.

HamiltonJet

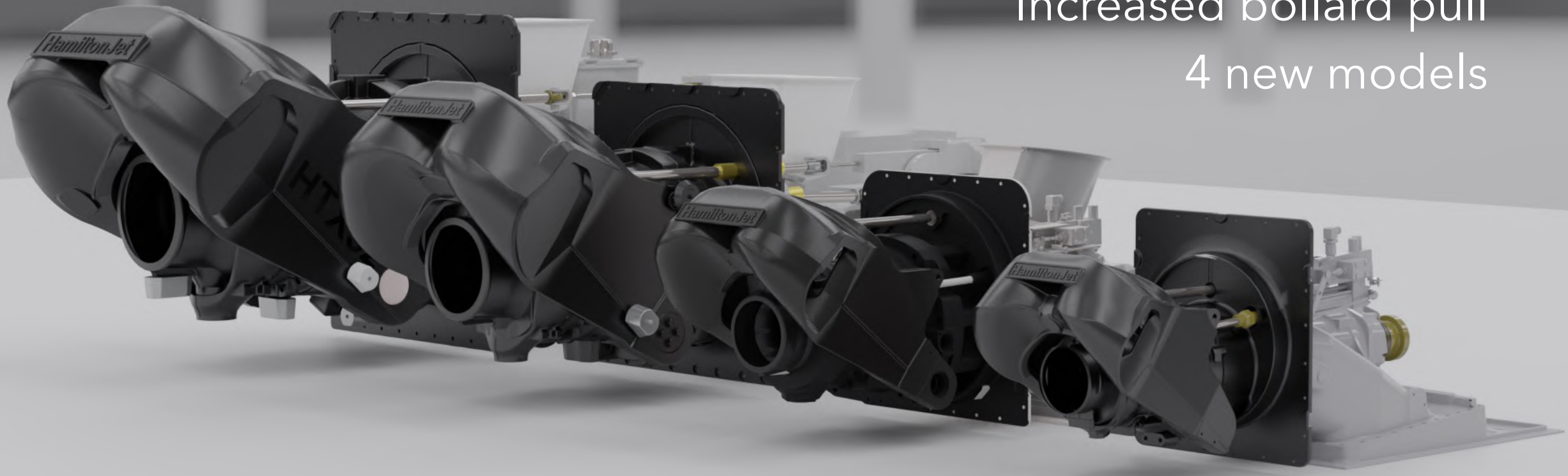
NEW JETS

Next generation design

Increased high efficiency

Increased bollard pull

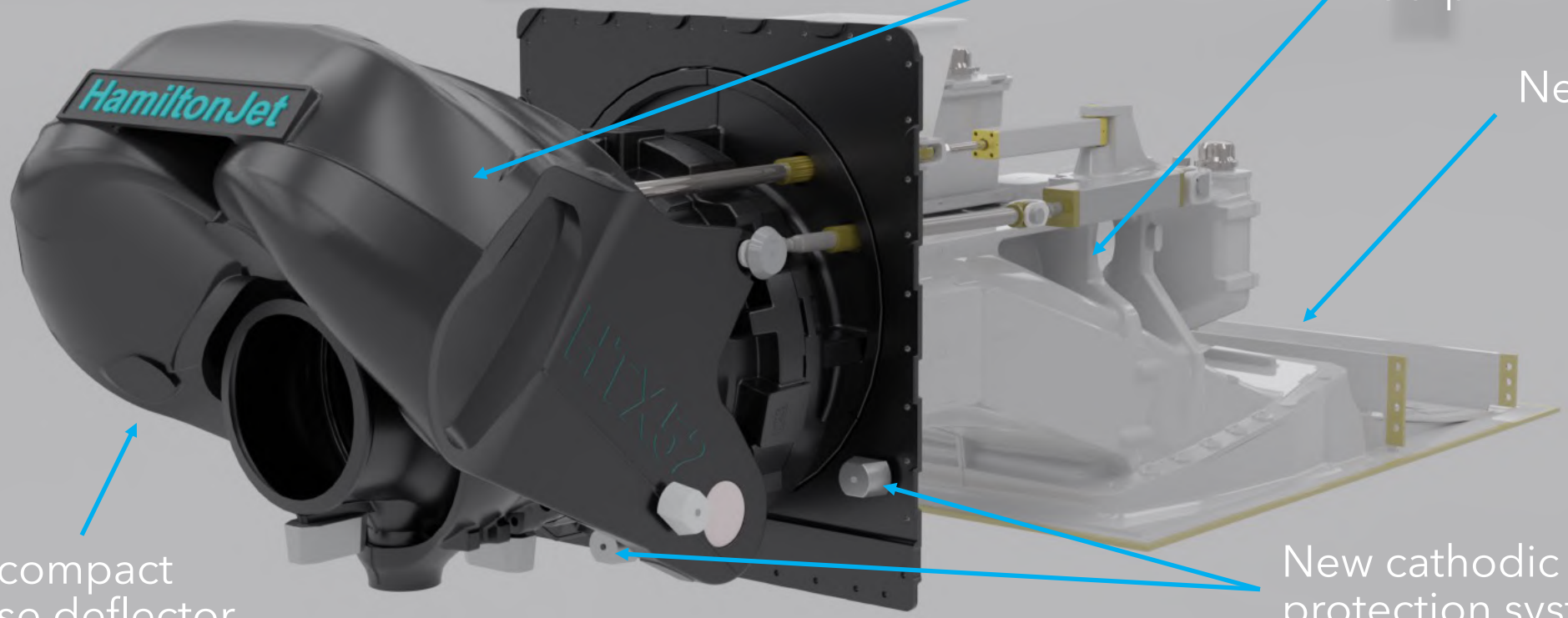
4 new models



HamiltonJet

NEW JETS

Next generation design



New steering system

Compact inboard footprint

New intake design

New compact reverse deflector

New cathodic protection system

HamiltonJet

NEW JETS

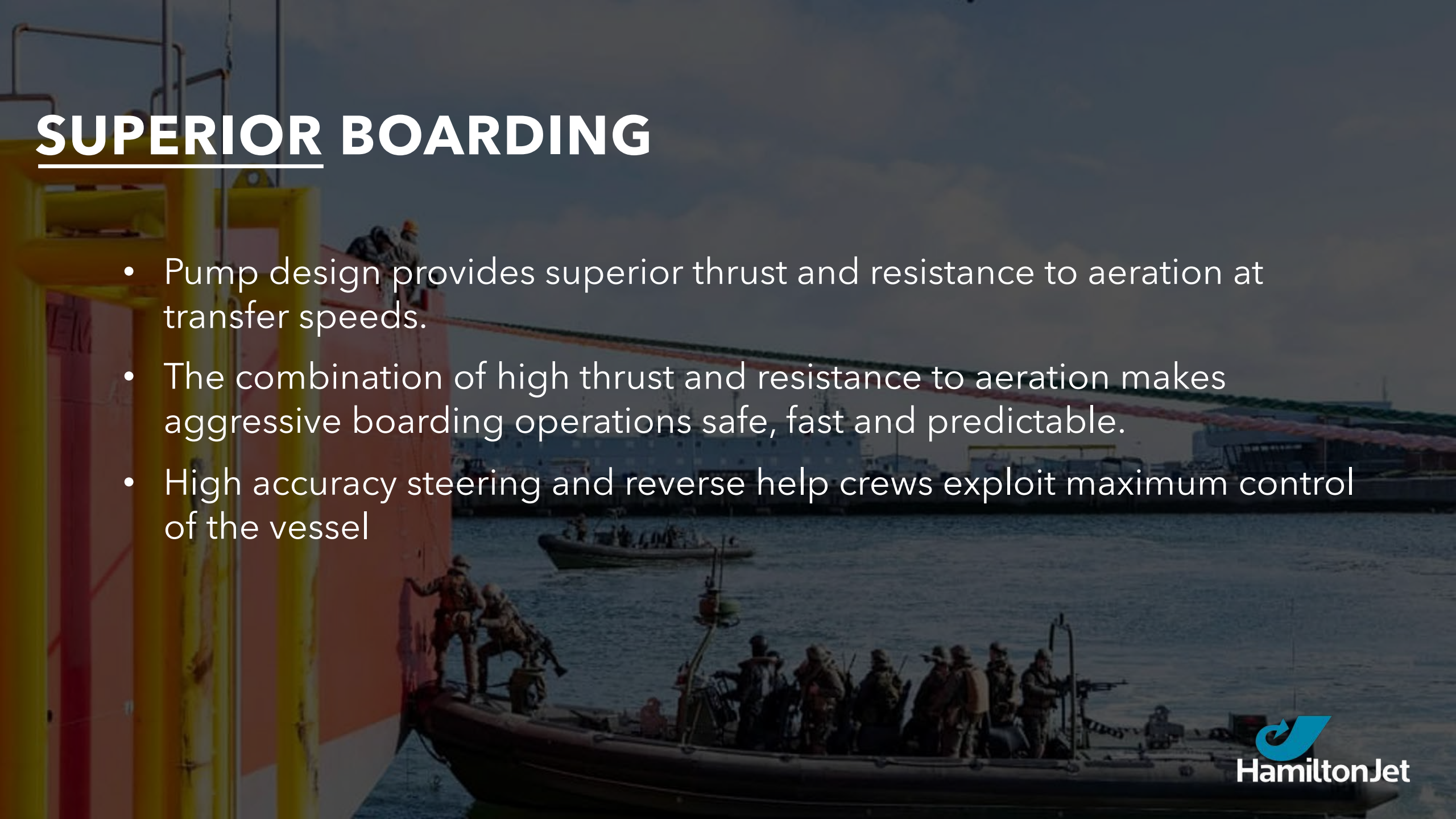
4 new next generation jets introduced so far……

	HJX29	HTX30	HTX42	HTX52
Replaces	HJ292	New model	HM461	HM571
Top speed	5%	7%	4%	4%
Bollard Pull	20%	19%	20%	20%
Notable		55+kts capability	7 kts minimum speed improvement	10 x better corrosion protection
size	Compact internal footprint Narrow reverse deflector	Compact internal footprint Narrow reverse deflector	Compact internal footprint Narrow reverse deflector	Compact internal footprint Narrow reverse deflector

HamiltonJet

SUPERIOR BOARDING

- Pump design provides superior thrust and resistance to aeration at transfer speeds.
- The combination of high thrust and resistance to aeration makes aggressive boarding operations safe, fast and predictable.
- High accuracy steering and reverse help crews exploit maximum control of the vessel



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NEW HJX27

AVX – FUTURE READY

Future ready

- JETanchor
- JETLink - Interface for autonomous or remote control systems
- Glass-bridge integration
- EHX

HamiltonJet

AVX - FUTURE READY

Next generation controls

- Dual redundant primary network
- Independent propulsion line backup
- Zonally redundant system architecture
- All weather capability
- Rugged unit design
- Milspec LEMO connectors and cables
- Worldwide environmental capability

HamiltonJet

AVX - FUTURE READY

Next generation controls

- Reduced footprint
- Flexible station layout
- From small scope vessels to large multi-station multi-jet configurations

HamiltonJet

HamiltonJet – USV READY

Controls for all missions

JetLink

blueARROW

- Plug and play CANbus digital network for control of water jets, engines and gearboxes.
- Advanced control features for manoeuvring, station keeping and autonomous operation.

AVX

- The next generation of vessel control.
- Unrivalled levels of redundancy and system availability.
- Advanced control features such as station keeping, unmanned and autonomous operation.
- Advanced station keeping modes.
- EHX Hybrid propulsion solutions available

HamiltonJet

HamiltonJet – USV READY

Jets for USV's

Simplified control

Direct control inputs, steering and reverse. No gear box rotation changes required

Low signature

Low acoustic transmission

Reduced radar signature

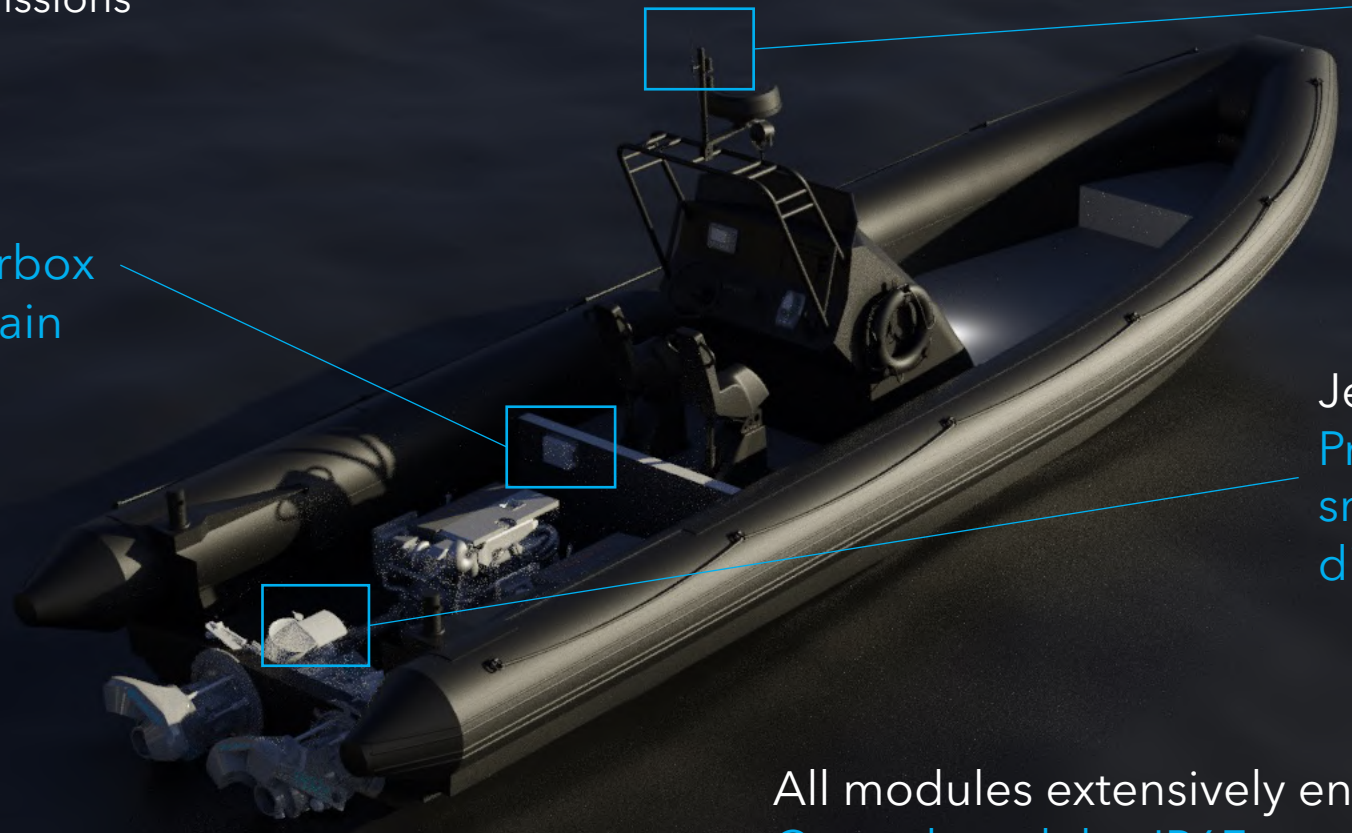
Protected drivelines

No underwater appendages prevent damage (accidental or deliberate) from debilitating the USV

HamiltonJet

HamiltonJet – USV READY

Controls for all missions



Dedicated GPS antenna
Provides positional input for advanced position control features*

Engine interface
Provides engine throttle and gearbox demand from main control station

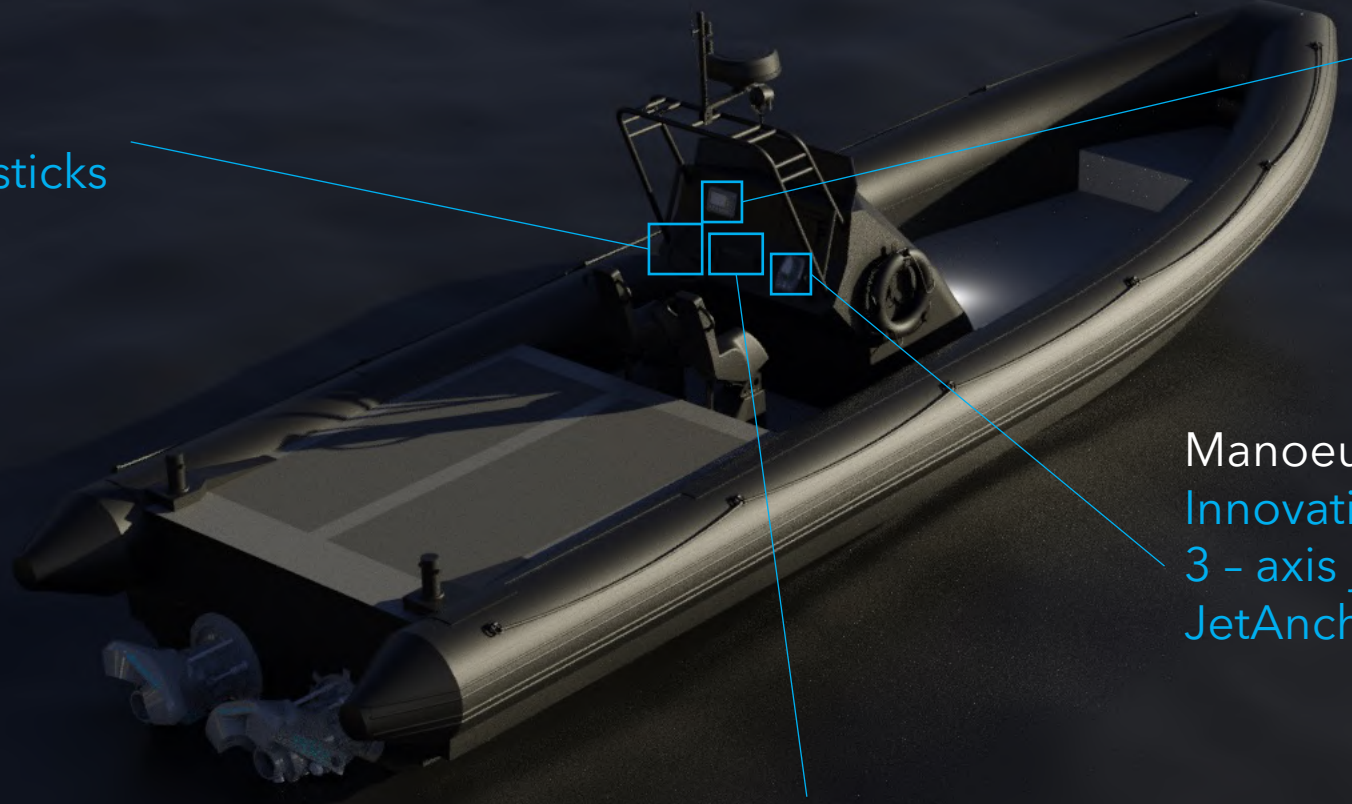
Jet control module
Provides fast and smooth control of direction and thrust

All modules extensively environmentally tested
Control modules IP67 rated†
Cables factory supplied and tested
MILSPEC connectors and cables†

HamiltonJet

HamiltonJet – USV READY

Controls for all missions



Station control panel
Information screen
Steering and reverse indication
Gearbox control
Dedicated backup control

Helm devices
Wheel, tiller, joysticks

Manoeuvring device
Innovative and intuitive Mouse Boat
3 – axis joystick
JetAnchor control

Levers
Combined (throttle & reverse)
Separate

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HamiltonJet - JETLINK

Simple USV integration

JetLink

- Features a protocol and binding (to SAE J1939) that can be used from third party monitoring and control systems.
- Integration with JETanchor positioning system

Allows control of each Waterjet as function of:

- Steering, Reverse and Throttle
- Azimuth and Thrust

Allows control of Vessel as function of:

- Steering and Thrust
- Azimuth and Thrust
- Heading and Speed
- Heading and Thrust
- Waypoints and Speed (under development)

HamiltonJet


HamiltonJet

- “Bolt on” module allows third party integration of control system.
- Enables flexible mission modules with the ability to easily change vessel from conventional control to USV.
- Fully USV’s can still be manually controlled

- COTS parts – JetLink hardware is not vessel specific meaning replacement module can be sourced any where globally from any of HamiltonJet’s 55 distributors.
- Retrofit option for existing bA and AVX systems
- Over 10 years of experience in the unmanned control segment

HamiltonJet

Autonomous References

Rafeal/BAE/Lockhead Protector

Patrol.
Single HJ292

Atlas ARCIMS

MCM
Twin HJ292/322

FFI Odin

MCM
Twin HJ322

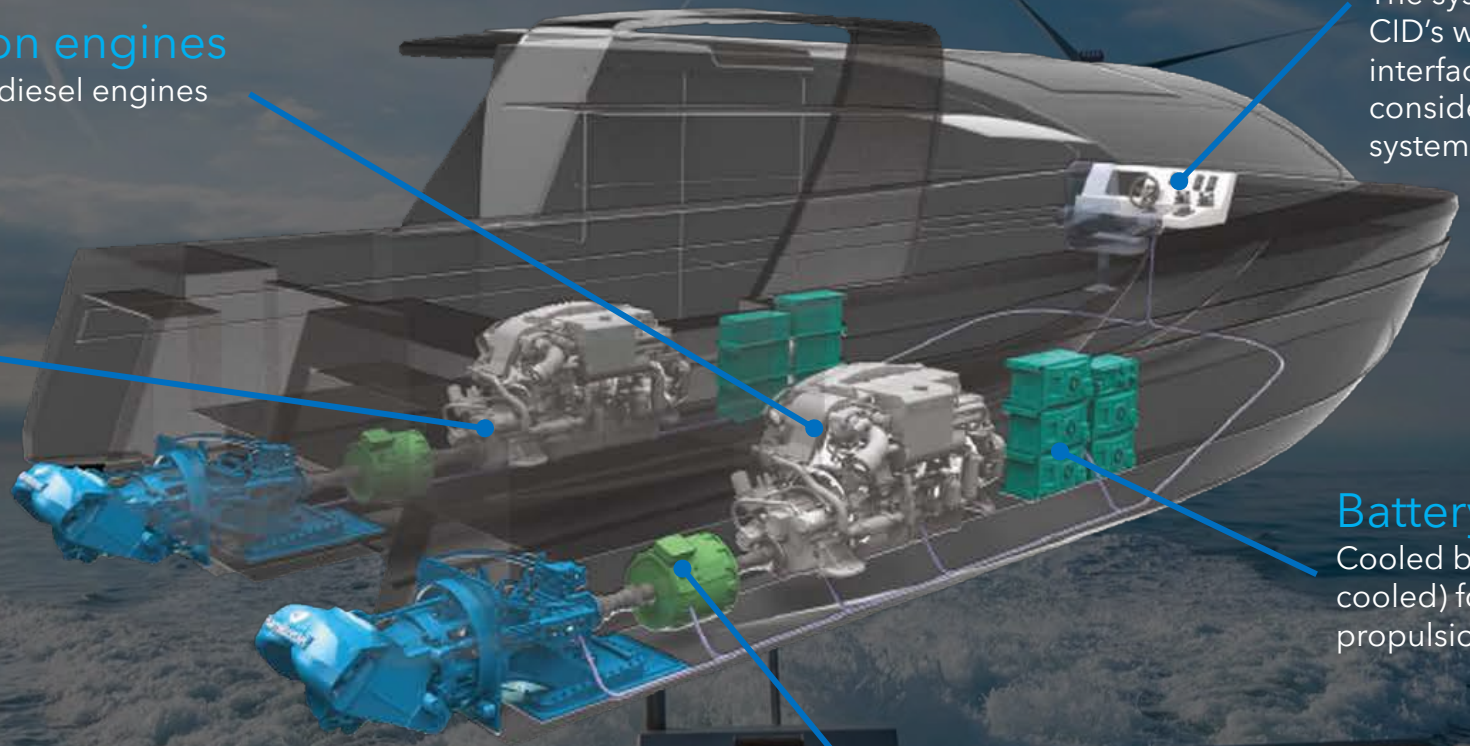
L3 Harris MAST-13

Patrol
Twin HJ292

Over 10 years experience in the USV market
170+ vessels using HamiltonJet autonomy systems

HamiltonJet

EHX HYBRID DRIVE



AVX with EHX controller

AVX vessel control with additional EHX hardware to control operation modes. The system retains all the standard AVX CID's with the main system control interface through the SDU. This is a considerable advantage over other systems

Main propulsion engines

Conventional marine diesel engines

Marine gearbox

Conventional marine gearbox

Battery bank

Cooled battery bank (water or air cooled) for running electric machine in propulsion mode, and/or hotel loads.

Waterjets

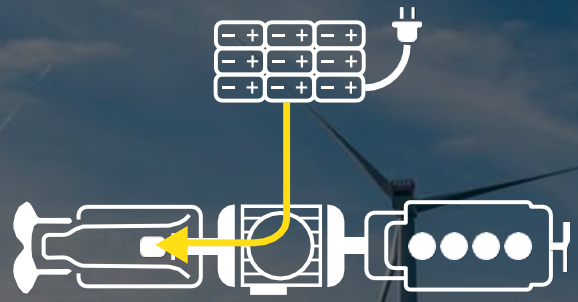
Standard HJ, HTX, HM or HT jets

Electric machine

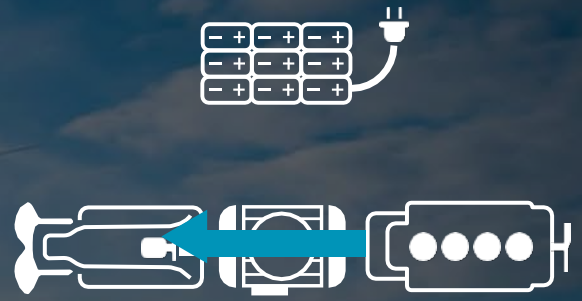
Danfoss electric motor that can be run both as propulsion motor (in electric only, hybrid and boost modes), or run as a generator to charge onboard batteries

HamiltonJet

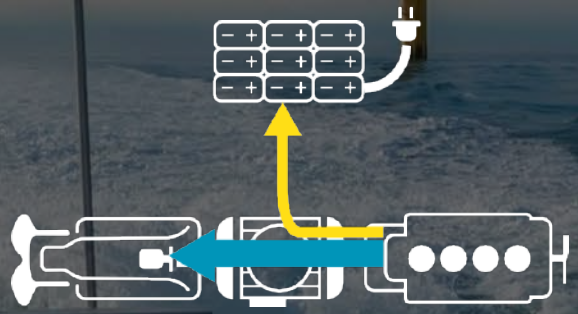
EHX HYBRID DRIVE



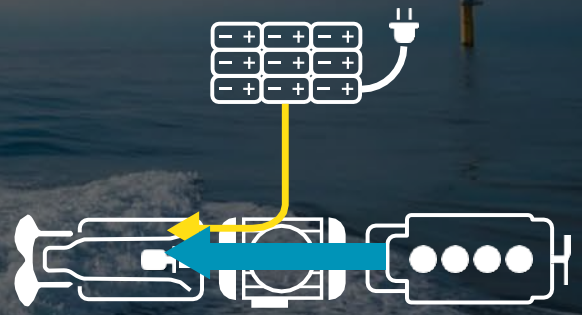
ELECTRIC ONLY



DIESEL ONLY



CHARGING



ELECTRIC BOOST

HamiltonJet

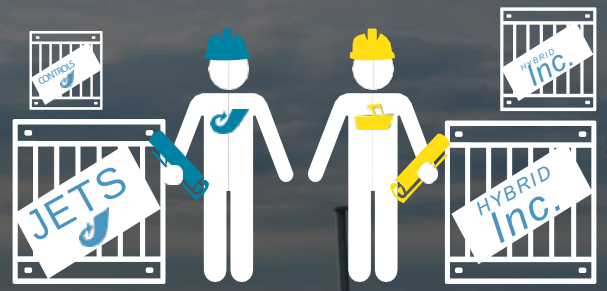
FLEXIBLE SCOPE OF SUPPLY

OPTION 1

LEAVE YOU TO IT

Waterjets and controls only

OPTION 2



DO IT WITH YOU

Waterjets and controls + integration expertise/support

OPTION 3

DO IT FOR YOU

Fully integrated Hamilton Electro-Hybrid Drive system

HamiltonJet

Operational Flexibility

Environmentally proven

Used by over 63 military and government agencies globally.

From Arctic conditions to the Middle East.

Global Support

Backed up by a global support network of over 55 distributors and service agents and 3 regional offices providing 24/7 technical support and spares holding

Ready for the modern theatre

State of the art electronic control systems allow simple integration of advanced control feature such as station keeping

HamiltonJet








QUESTIONS

HamiltonJet