



ALAMARIN-JET
GO WITH THE FLOW

OMEGA SERIES

Ω42 Technical Specification

ALAMARIN-JET

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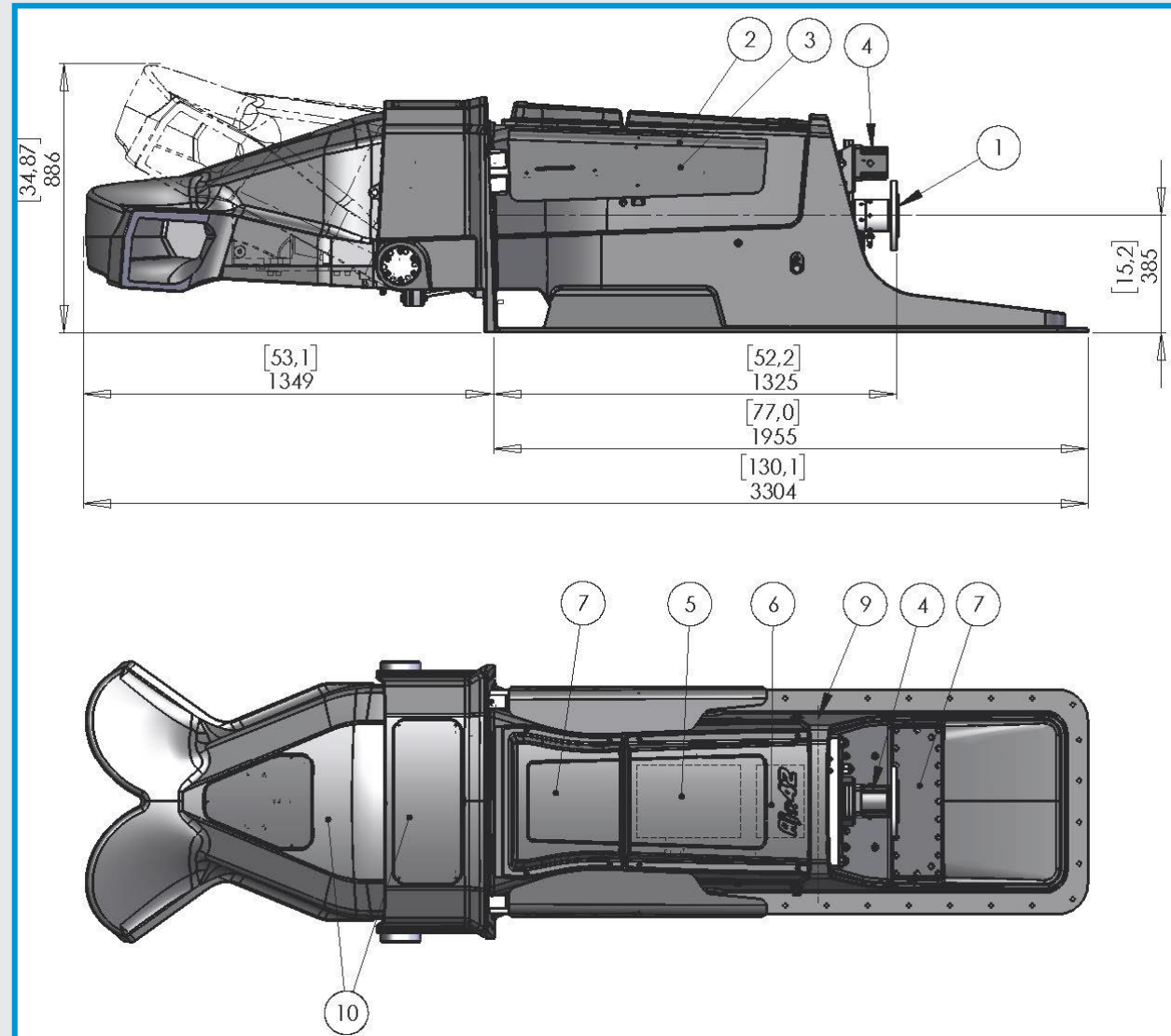


Technical data

Max. power	1500kW/2040hp
Max . rpm	2300 1/min
Max. torque	6,3kNm
Impeller diameter	480mm (18.9")
Unit weight	710kg (1565lbs)
Entrained water*	171L

SPECIFICATIONS

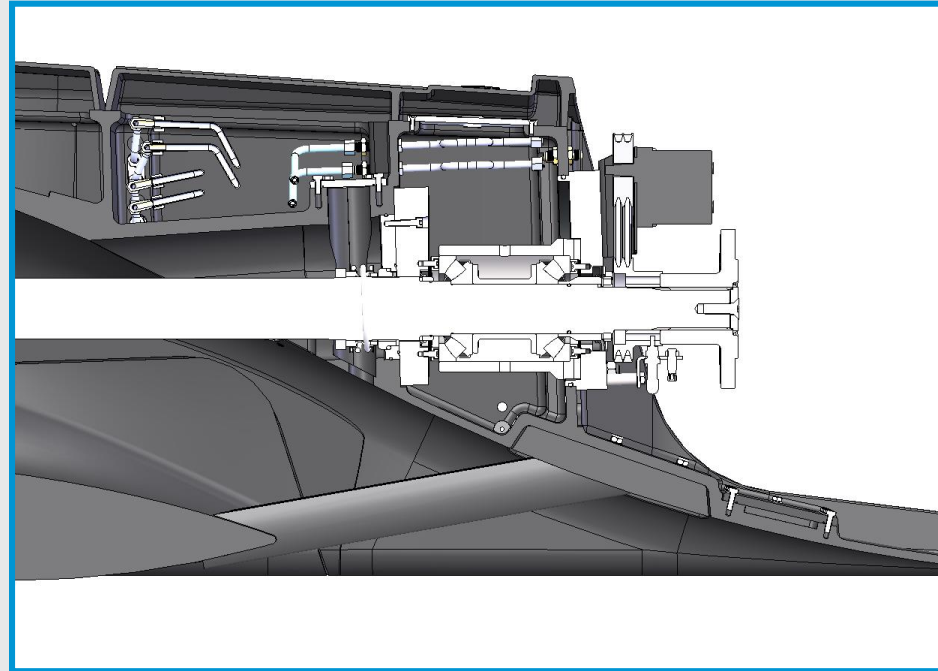
1. DIN-180/225 drive flange
2. Integrated hydraulic steering cylinder Sigma/conventional controls
3. Integrated hydraulic cylinders (2pcs) for reverse deflector control, Sigma/conventional controls
4. Integrated hydraulic pump
5. Integrated hydraulic valve assembly for Sigma
6. Front bearing oil reservoir
7. Integrated oil cooler for hydraulic system
8. Inspection hatch with extension
9. Bulkhead connection area
10. Complete splash guard and protection for external parts



UNIQUE FEATURES

FIBS – Frame Integrated Bearing Structure

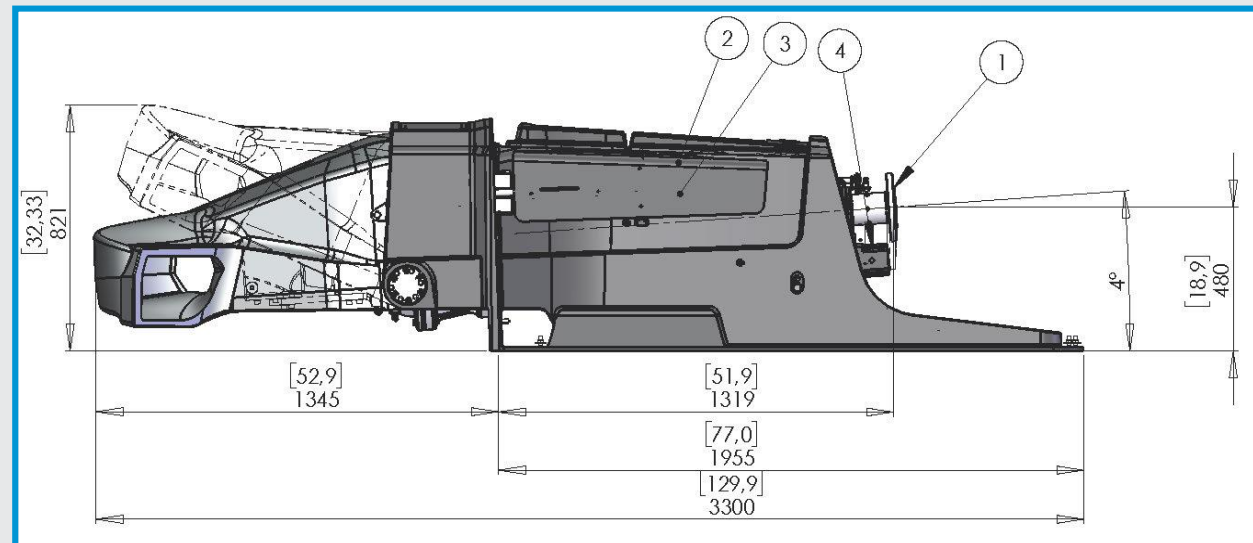
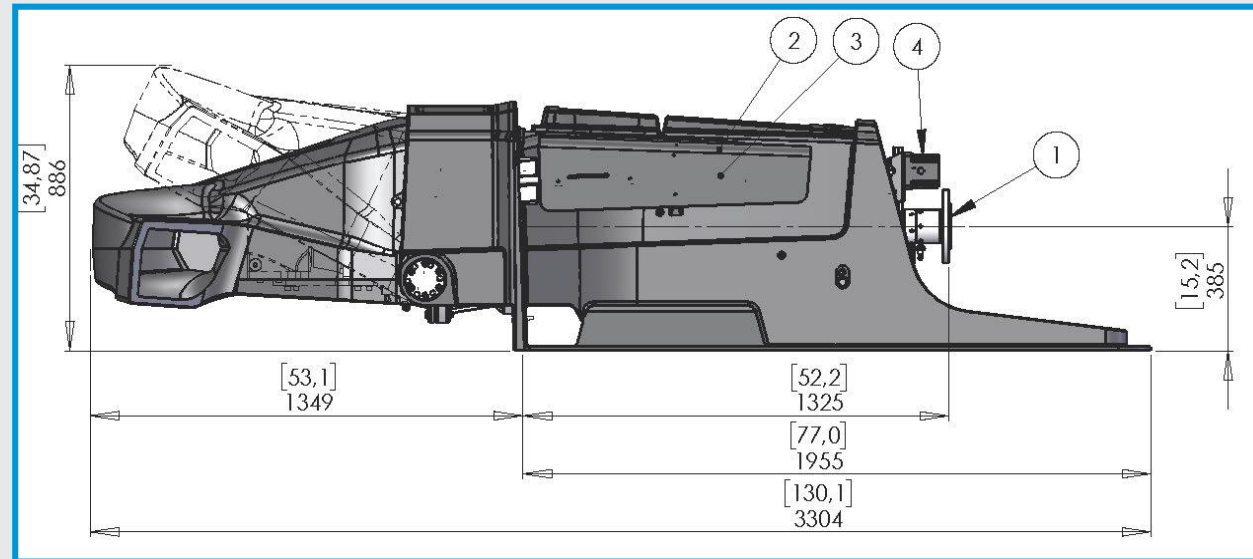
- No separate bearing housing as it is part of the jet frame
- Oil is cooled by the intake structure
- Oil level sensors and temperature sensors have multiple locations to allow for angle of jet when installed in different configurations and dead rise angles
- Thrust transmitted to hull bottom, instead of transom



UNIQUE FEATURES

DAS – Dual Angle Shaft (Patented)

- By rotating the stator and shaft by 180° the shaft angle is either 0° or 4°
- No additional parts are required
- Allows flexibility for designers when considerations such as engine sump depth are a factor in bobtail installation
- Intake performance not affected by installation angle



TECHNICAL FEATURES



Impeller and Tunnel Construction

- Duplex stainless steel impeller
- Duplex stainless steel shaft
- Duplex stainless steel wear ring
- Impeller adjustment possible with shims

Stator and Rear Bearing Construction

- Water lubricated rear bearing or oil lubricated rear bearing
 - Oil lubricated option includes frame integrated hoses to allow for condition monitoring
 - Mechanical seal to protect the oil lubricated rear bearing
- Stainless Steel or Aluminium Stator options

Reverse Deflector

- Balanced design for low operating forces
- High reverse thrust
- 1 hatch located on reverse deflector to allow for inspection
- Enclosed construction for spray free operation
- Steering nozzle and other critical areas protected against mechanical damage (ice, snags, dock etc.)
- 4 point pivot support, ensures ruggedness for demanding operation

Steering Nozzle

- Balanced design for low operation forces
- Wear parts separated for simple and cost effective repairs/replacement

TECHNICAL FEATURES



Integrated hydraulics

- Steering and deflector cylinders are pre installed on the jet
 - 1 steering cylinder (balanced nozzle allows simple hydraulic helm steering)
 - 2 deflector cylinders (one master 1 slave)
- SIGMA Valve block installed inside the jet frame protected from external factors
- Standard morse cable valve can be installed instead of SIGMA control
- Oil cooler in frame
- Position sensors for deflector and steering as standard, secondary position sensor option available for CLASS approval
- Cylinder covers protect cylinders and sensors
- Separate oil reservoir for high pressure hydraulic oil is remotely mounted as with current jets (integrated temp and level sensors)

Inspection Hatches

- 2 Main covers – 1 for tunnel inspection and 1 for both hydraulic and bearing inspection
 - Tunnel inspection hatch at rear, located under cover with flexible rubber bellow instead of fixed alu/steel collar
 - Mechanical seal inspection hatch in hydraulic compartment allows easy access for inspection (during dry docking)
 - Bearing inspection hatch sealed at front, no risk of water leakage into the front bearings.



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SIGMA CONTROLS

SIGMA Technical Specification

SPECIFICATIONS



- Modular and scalable architecture – From single installation up to 4 jets
 - Multiple control stations
 - Multiple control head and arraignment options
- Flexible BUS architecture - each Jet unit work as an individual BUS node
- Factory made modular cabling system, no custom cables required
- Increased Redundancy – Based on individual drivelines and multiple control law levels
- Easy to approach design
 - Installation is based on plug'n'play modules
 - Intuitive walk through commissioning procedure
 - Simple to use, new High Resolution display with modern UI/UX usability
 - Easy maintenance
- New control Intelligent Dynamics features – Dynamic Positioning, Virtual Anchoring and Heading keeping options (Autopilot)
- Digital engine interface – Direct digital CAN-CAN Throttle control for responsive throttle management without delays
- USV Ready – Comprehensive low-level (CAN) and high-level (IP) interfaces with augmented control algorithms and engine management for fast USV deployment
- Sophisticated diagnostics – Multiple data logging and diagnostic options
- Intelligent self-monitoring system. Temperature, Pressure and Fluid Levels are continuously monitored

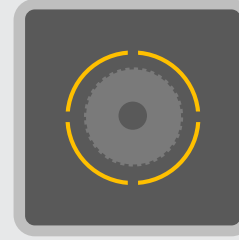
MAIN COMPONENTS



E-Wheel
EWHL



Twin
Levers
TWL



3-Axis
Joystick
3XJS



Computing
Display Unit
CDU



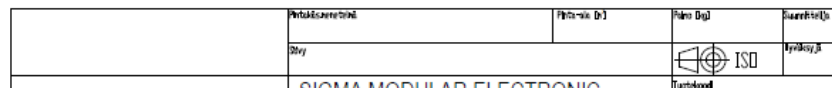
Helm Control Unit
HCU



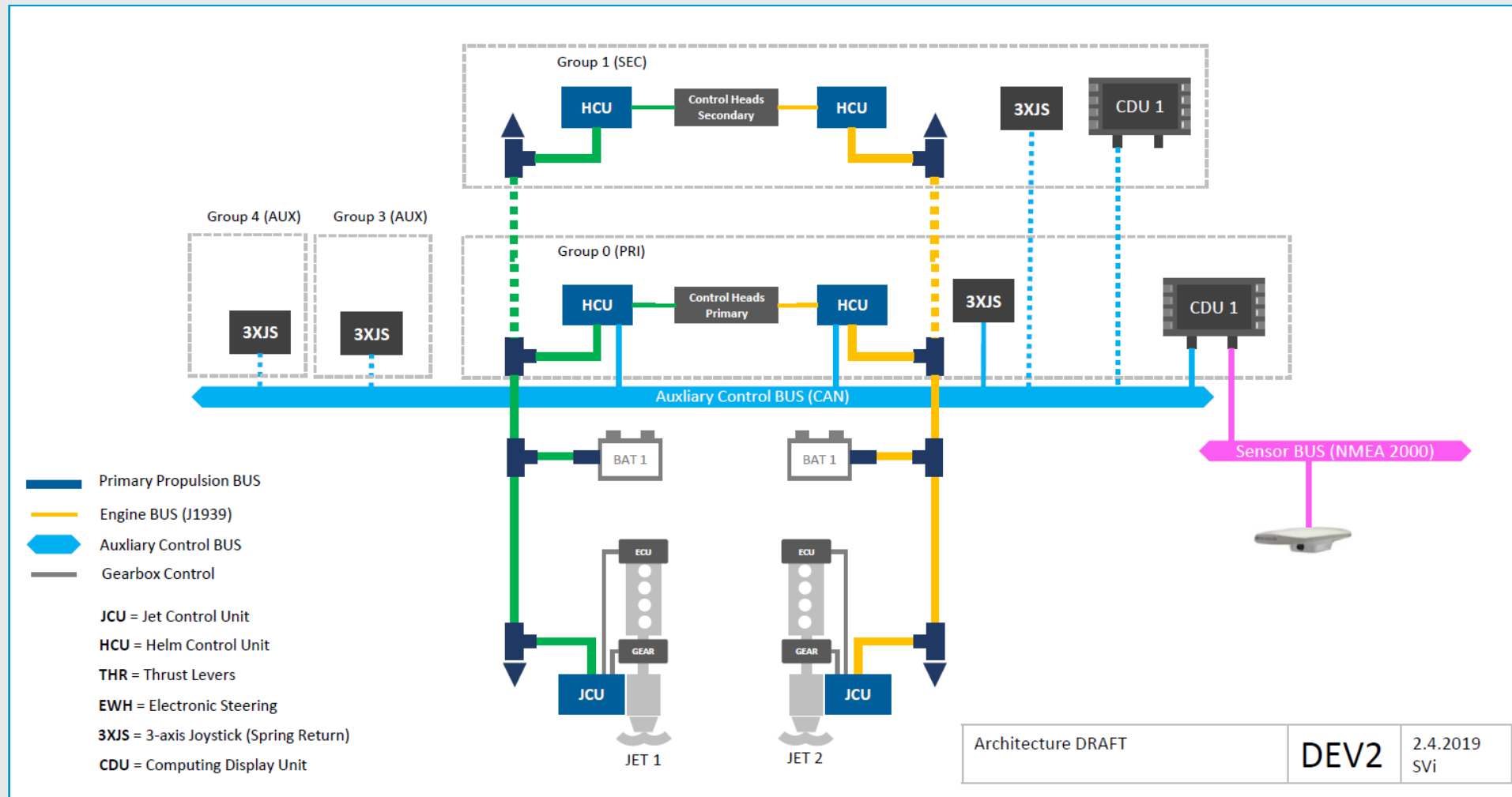
Jet Control Unit
JCU



3XJS Control Unit
3CU



ADVANCED SAMPLE SYSTEM LAYOUT



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