

PRODUCT RANGE



ALAMARIN-JET
GO WITH THE FLOW

ALAMARIN-JET NETWORK

Alamarin-Jet Oy are world leading manufacturers of waterjet propulsion units and controls systems. Suitable for input power up to 1500 kW / 2040 HP, Alamarin-Jet are renowned for an innovative, robust and efficient design philosophy.

Alamarin-Jet have been pushing water jet innovation particularly in the last 10 years introducing technical features such as the patented Combi-Frame, a jet frame design which allows for multiple installation methods in AJ 245 and AJ 285 as well as the patented Dual Angle Shaft recently introduced in the OMEGA SERIES jets which allows 2 different shaft angles without changing jet inclination. Alamarin-Jet see the importance in future technologies within the marine industry and therefore have invested heavily in next generation control and monitoring systems, this includes fully autonomous operations, collision avoidance, remote surveillance and remote monitoring. All built on the SIGMA CONTROLS platform.

A RELIABLE AND SKILLED DEALER NETWORK COVERS 70+ COUNTRIES ALL AROUND THE WORLD, PROVIDING RAPID RESPONSE AND DELIVERING SERVICE AND SPARE PARTS WHEN NEEDED THE MOST. ALAMARIN-JET CONSTANTLY WORK ON DEVELOPING THE NETWORK IN ORDER TO MAINTAIN HIGHEST POSSIBLE LEVEL OF SALES AND SUPPORT.

OVER 40 YEARS SUCCESSFUL EXPERIENCE IN DESIGNING, MANUFACTURING, AND SUPPLYING WATERJET PROPULSION SYSTEMS AROUND THE WORLD

FINNISH QUALITY. OVER 90% MADE IN FINLAND, 10% REMAINING EUROPEAN UNION

BROAD RANGE OF JET SIZES SUITABLE FOR INPUT POWER UP TO 1,500 KW INPUT

BEST POWER/SIZE/WEIGHT CHARACTERISTICS IN THE MARKET

HIGHLY ACCURATE PERFORMANCE CALCULATIONS USING THE LATEST SOFTWARE COMBINED WITH YEARS OF EXPERIENCE

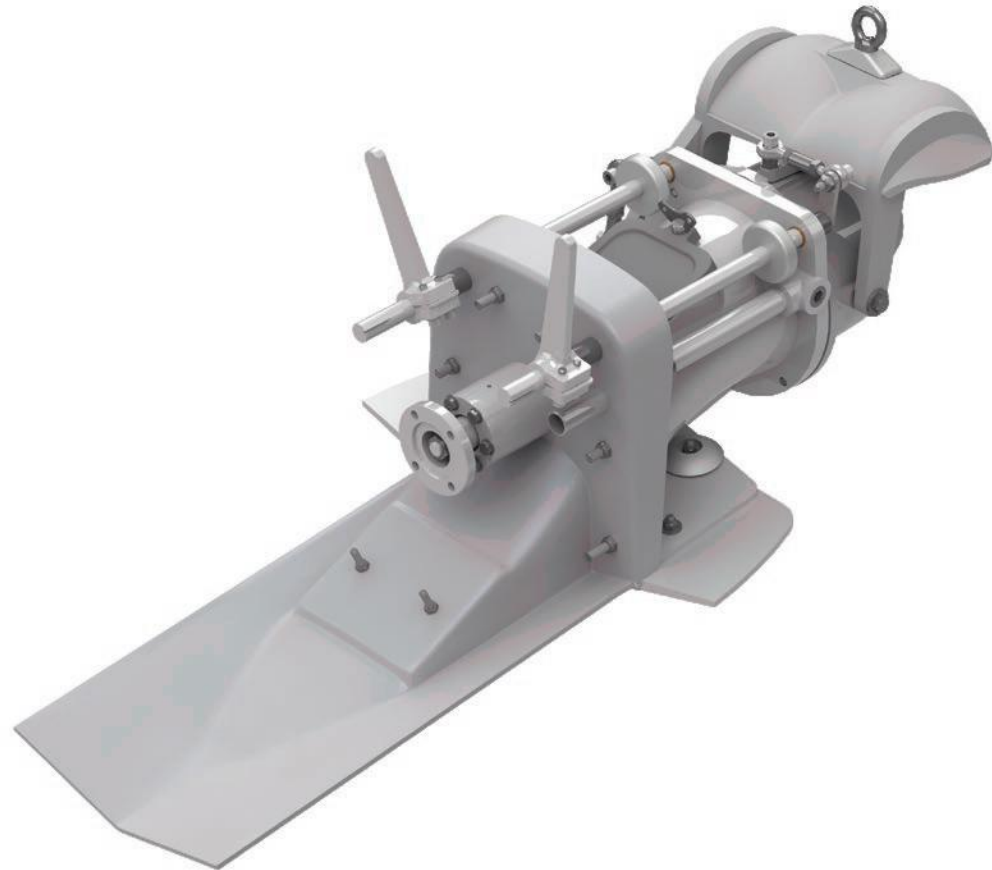
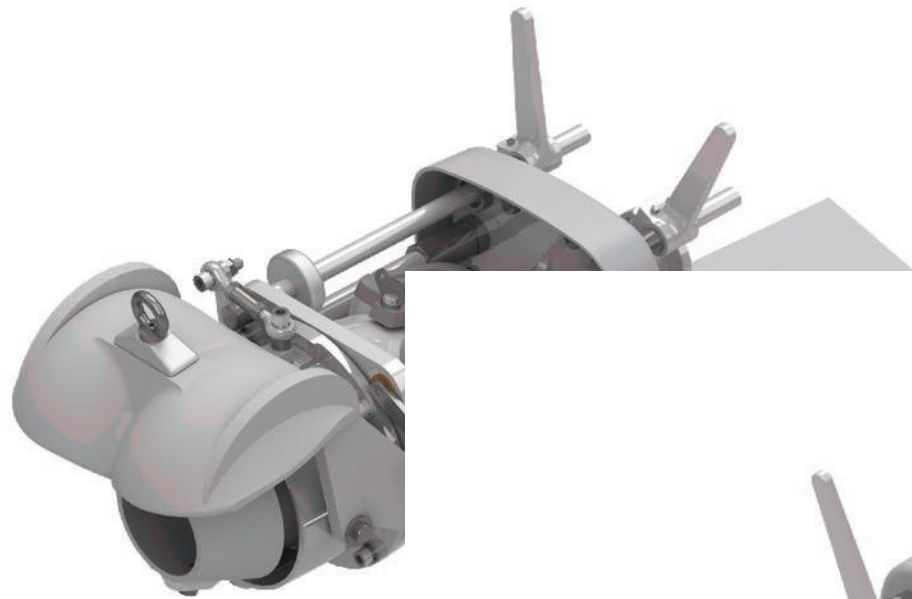
FASTEST PRODUCTION LEAD TIMES IN THE INDUSTRY

COMPANY DEDICATED TO SERVICE AND SUPPORT

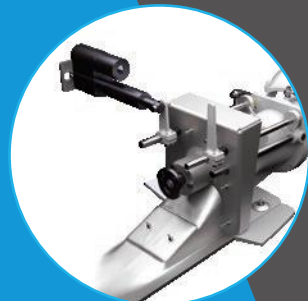
DEALER/SERVICE NETWORK IN MORE THAN 50 COUNTRIES

DIRECT FACTORY SUPPORT FOR ALL CUSTOMERS

AJ 160



DEFLECTOR
CONTROL



SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



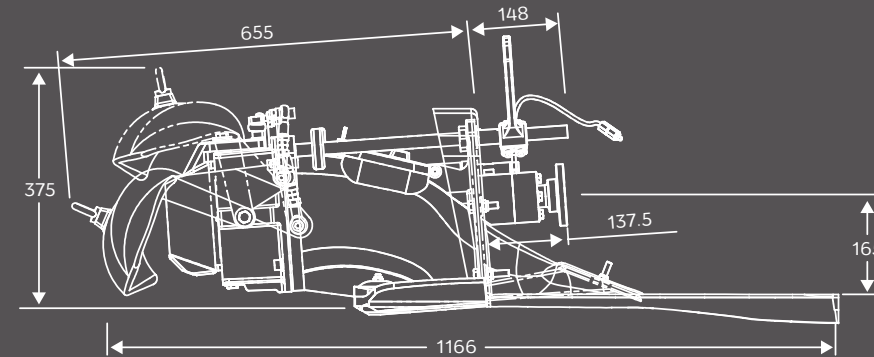
IMPELLER SHAFT RPM
MAX. 5000 1/MIN



**MAX. VESSEL
DISPLACEMENT**
1000 KG (2205 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
38 KG
(84 LBS)



IMPELLER DIAMETER
MAX. 186 MM
(7.3")



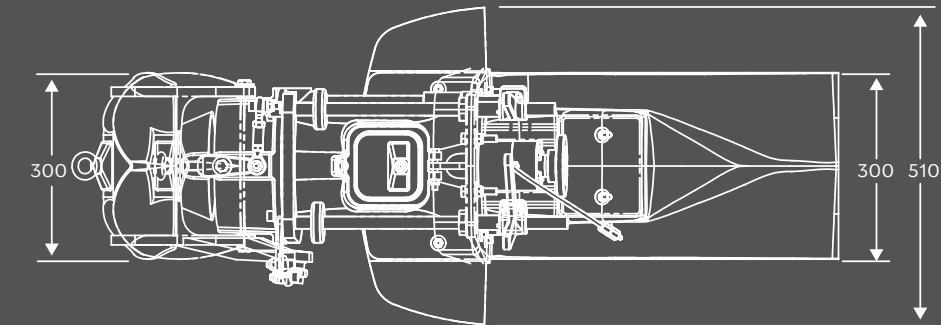
MAX INPUT POWER
100 KW
(136 MHP)



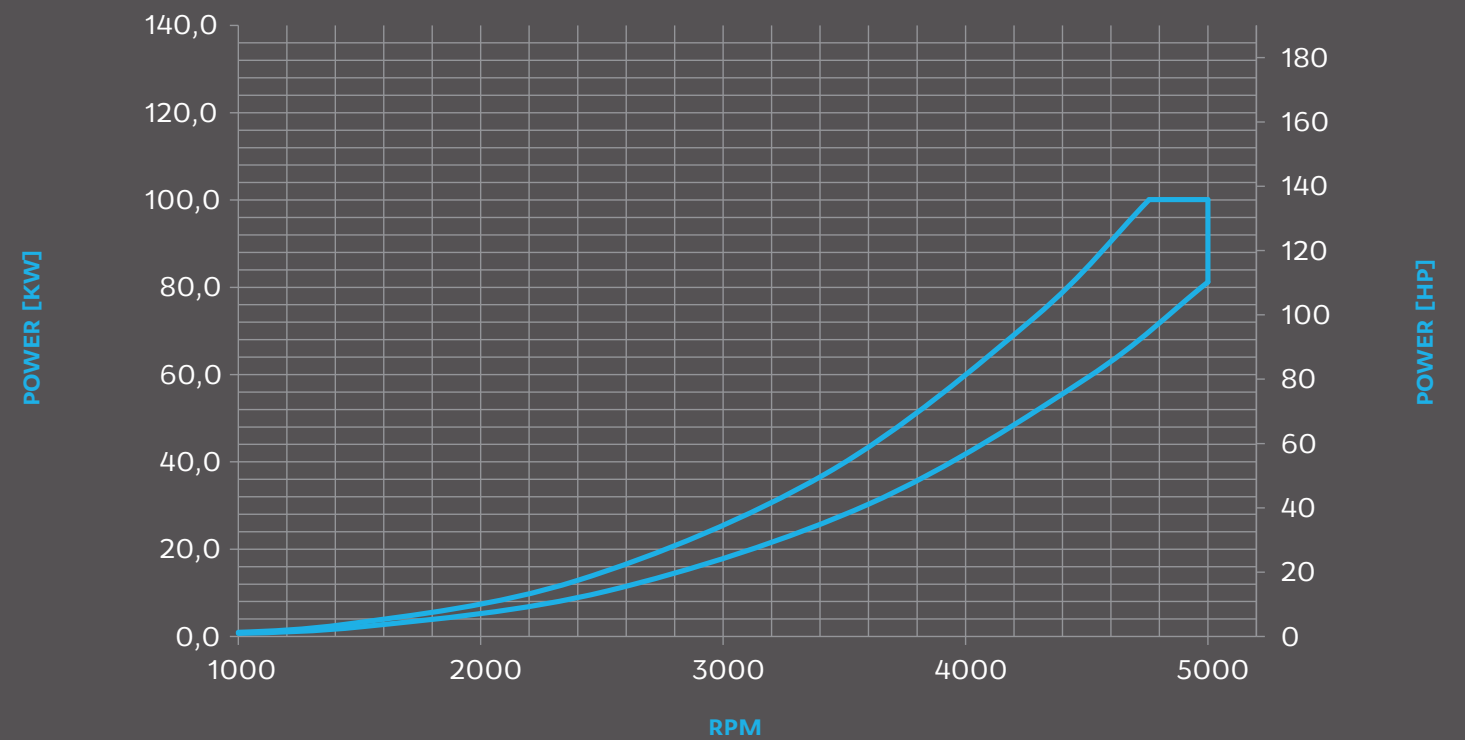
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



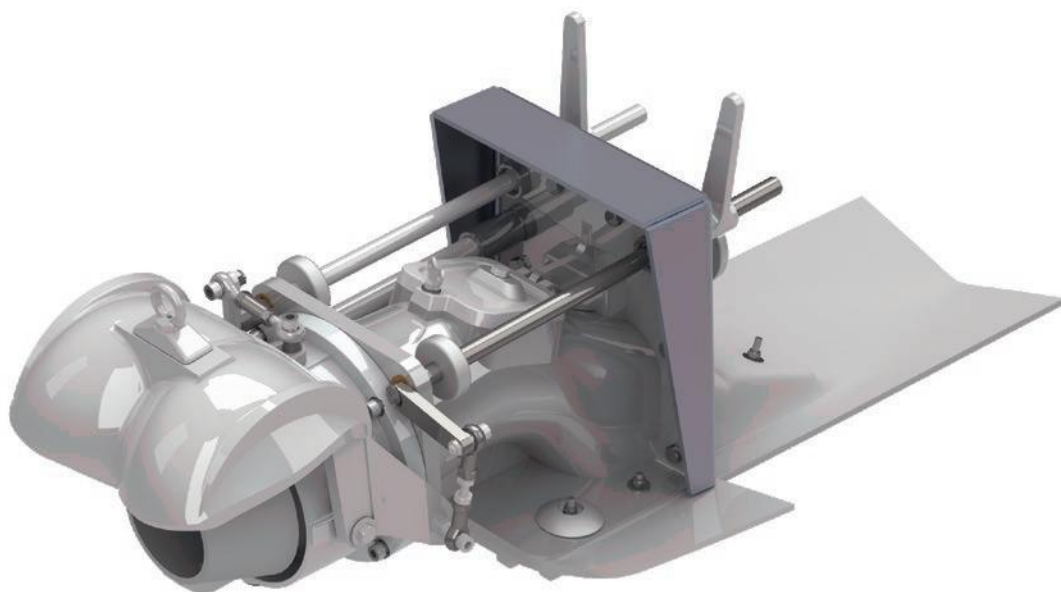
**REVERSE DEFLECTOR
CONTROL**
MECHANICAL OR
ELECTRICAL (ACU)



AJ 160 POWER/RPM COVERAGE



AJ 180/185



REVERSING
DEFLECTOR
CONTROL



SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



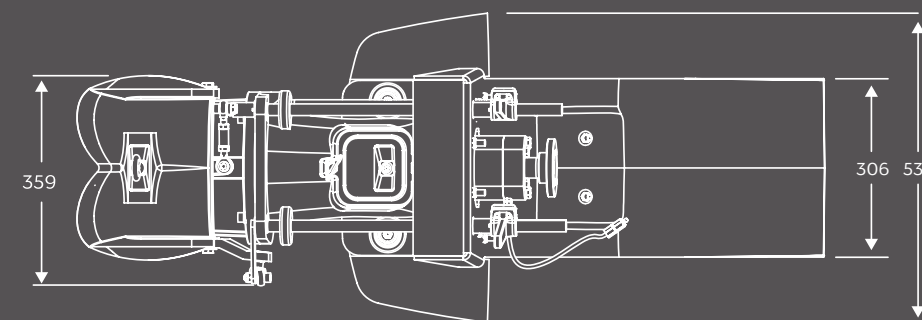
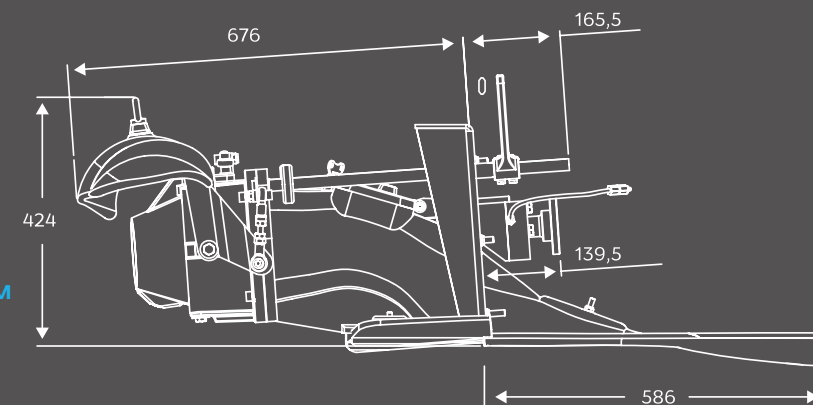
IMPELLER SHAFT RPM
MAX. 5000 1/MIN



**MAX. VESSEL
DISPLACEMENT**
1700 KG (3700 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
48 / 50 KG
(106 / 110 LBS)



IMPELLER DIAMETER
MAX. 192 / 197 MM
(7.6" / 7.8")



MAX INPUT POWER
120 kW
(163 MHP)

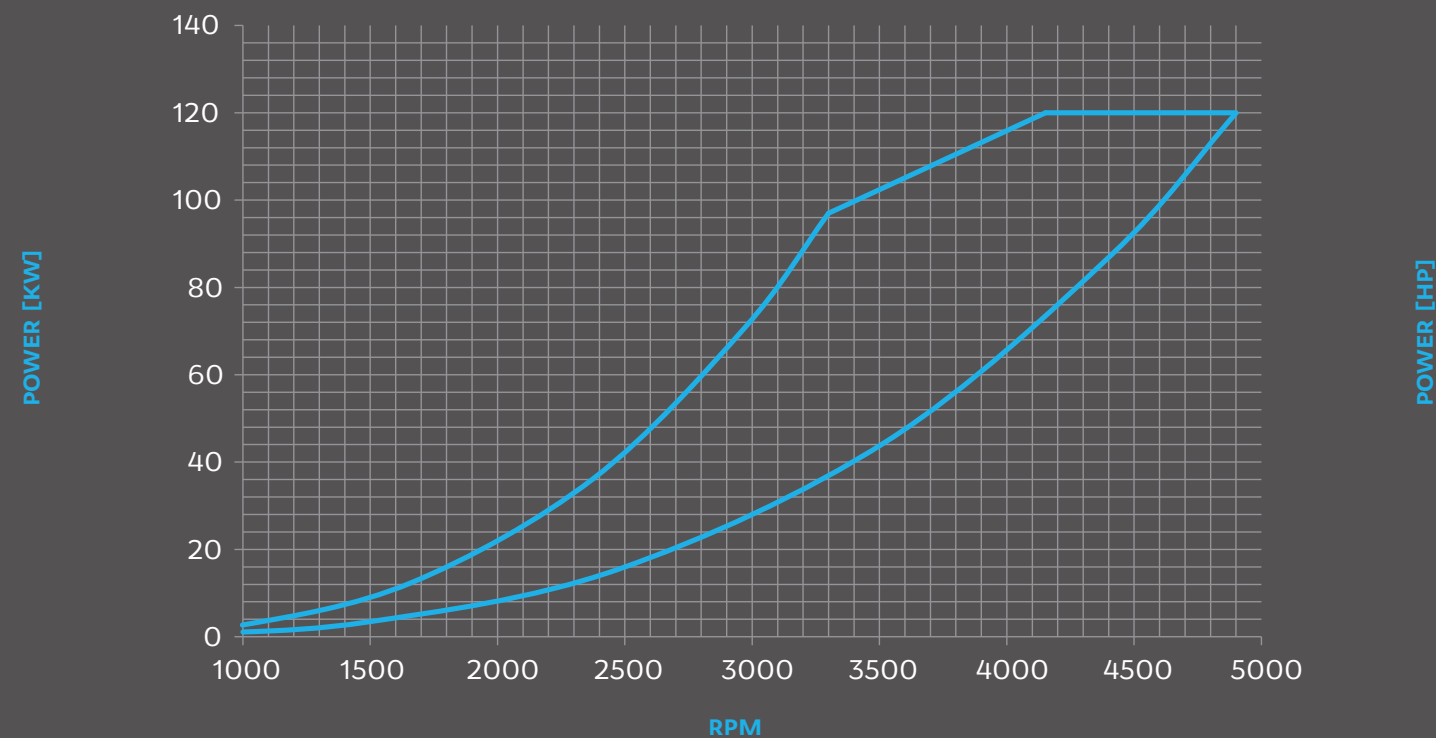


JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

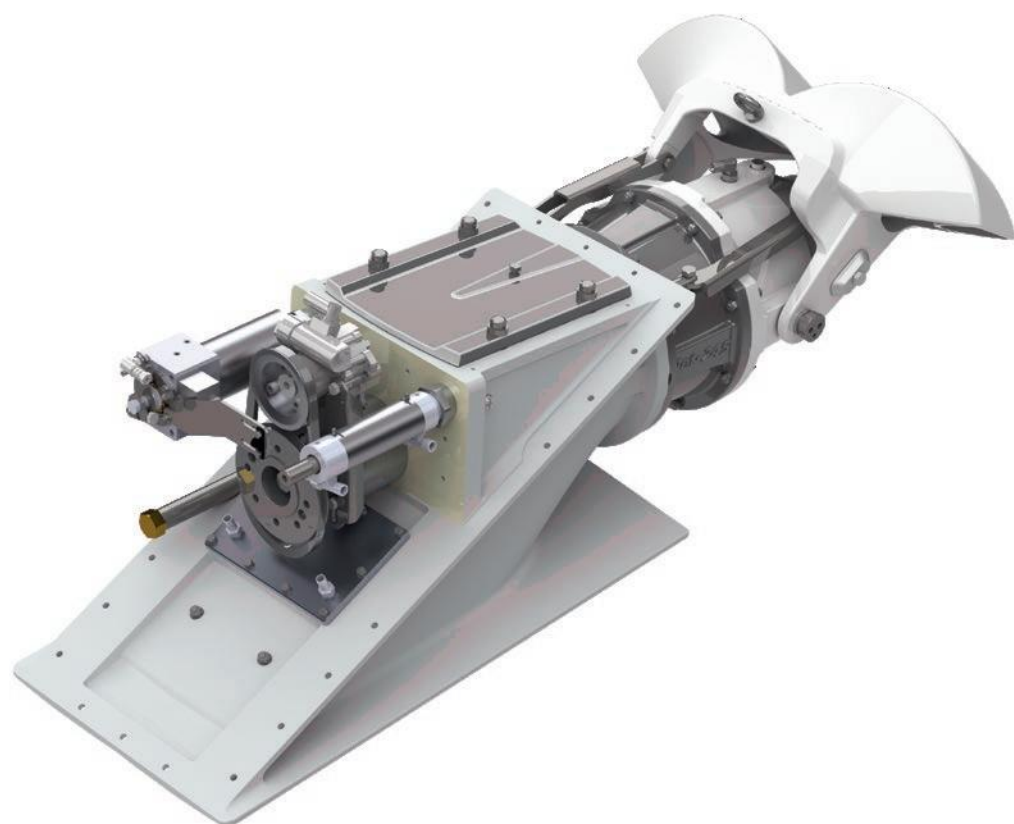
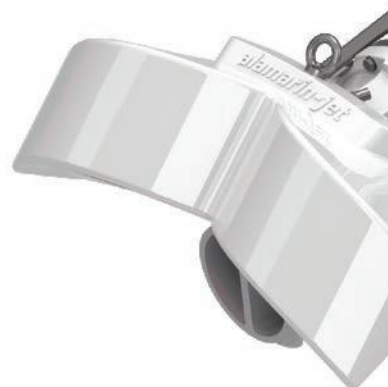


**REVERSE DEFLECTOR
CONTROL**
MECHANICAL OR
ELECTRICAL (ACU)

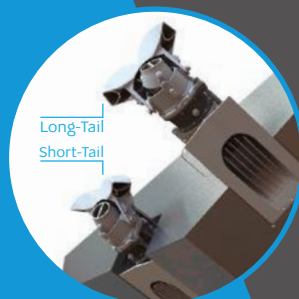
AJ 180/185 POWER/RPM COVERAGE



AJ 245



TWO INSTALLATION
OPTIONS



PATENTED
COMBI-FRAME
TECHNOLOGY

Integrated
oil cooler
and steering
cylinder

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



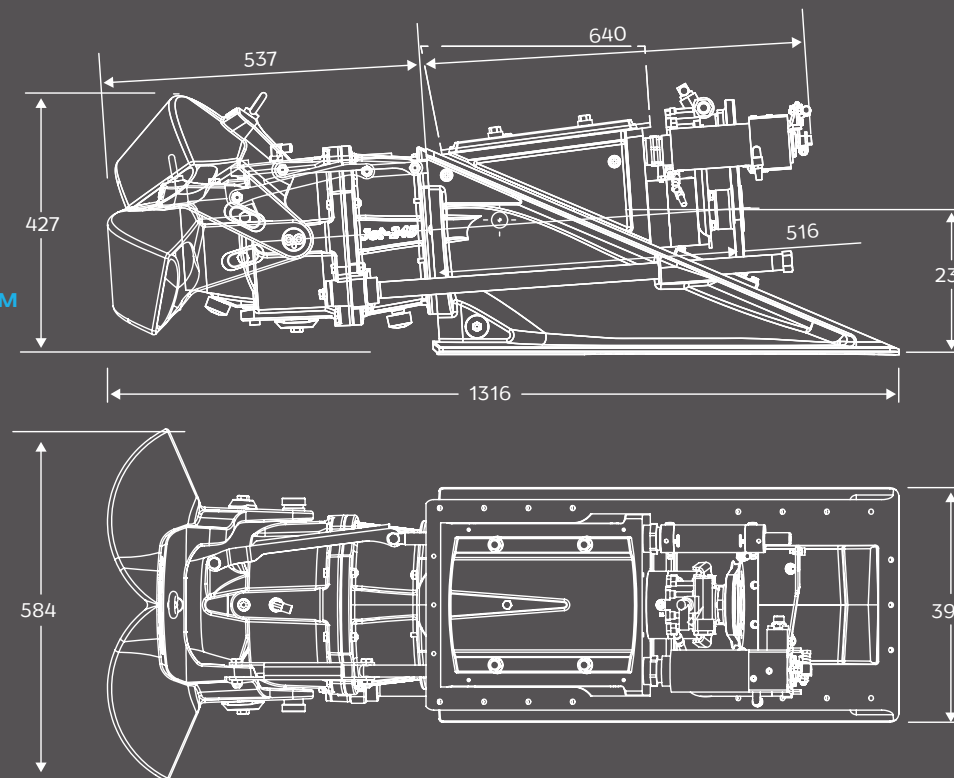
IMPELLER SHAFT RPM
MAX. 4600 1/MIN



**MAX. VESSEL
DISPLACEMENT**
3500 KG (7700 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
95 KG
(209 LBS)



IMPELLER DIAMETER
MAX. 245 MM
(9.6")



MAX INPUT POWER
235 KW
(320 MHP)

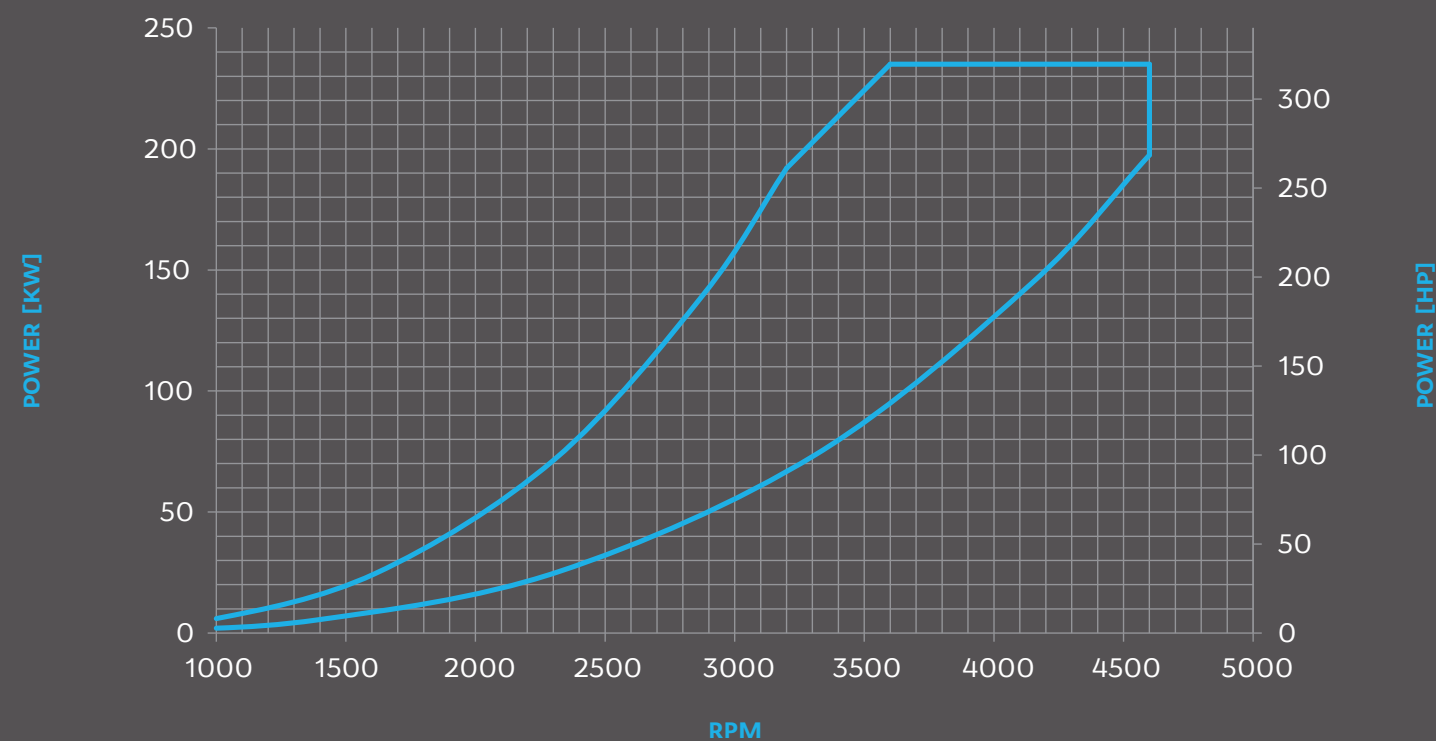


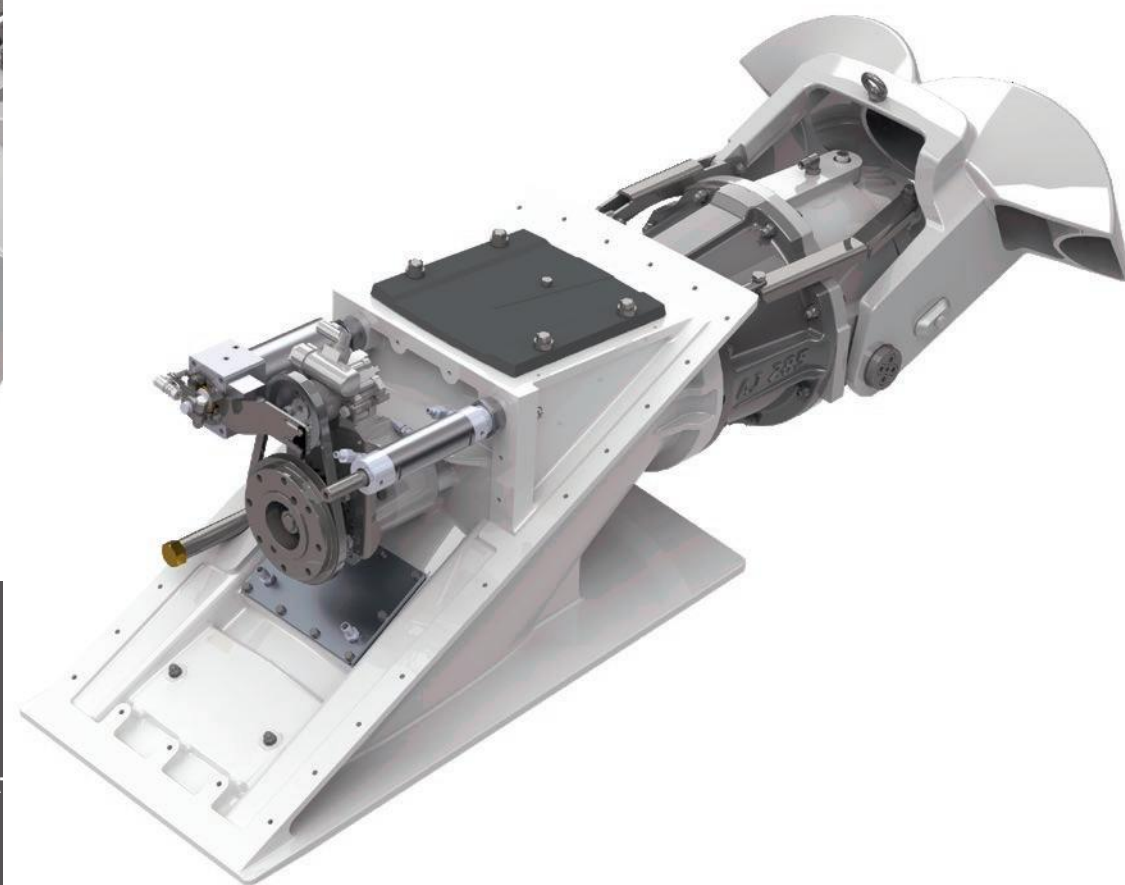
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



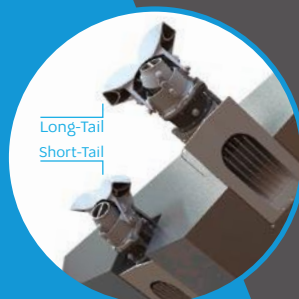
**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC OR
SIGMA CONTROLS

AJ 245 POWER/RPM COVERAGE





TWO INSTALLATION
OPTIONS



PATENTED
COMBI-FRAME
TECHNOLOGY

Integrated
oil cooler
and steering
cylinder

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



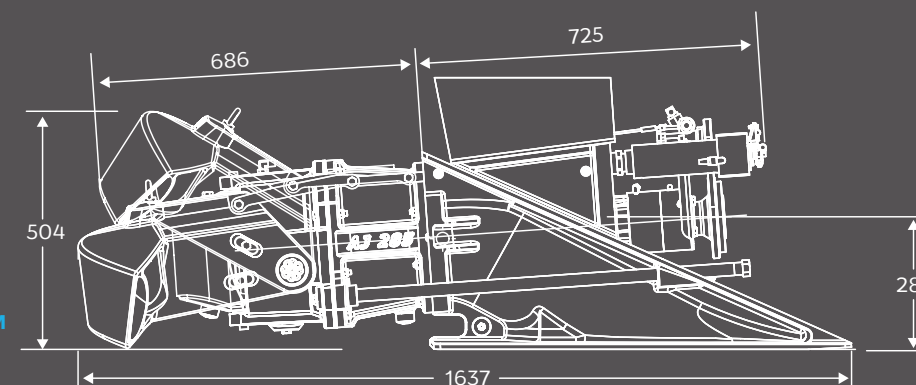
IMPELLER SHAFT RPM
MAX. 3700 1/MIN



**MAX. VESSEL
DISPLACEMENT**
5000 KG (11 000 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
154 KG
(340 LBS)



IMPELLER DIAMETER
MAX. 288 MM
(11.3")



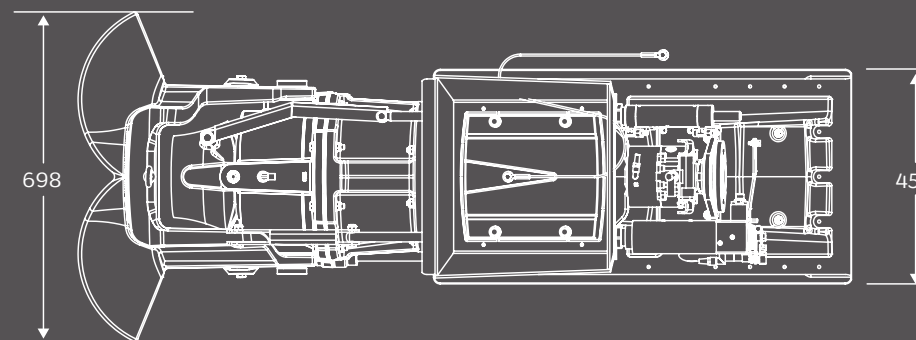
MAX INPUT POWER
370 KW
(500 MHP)



JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

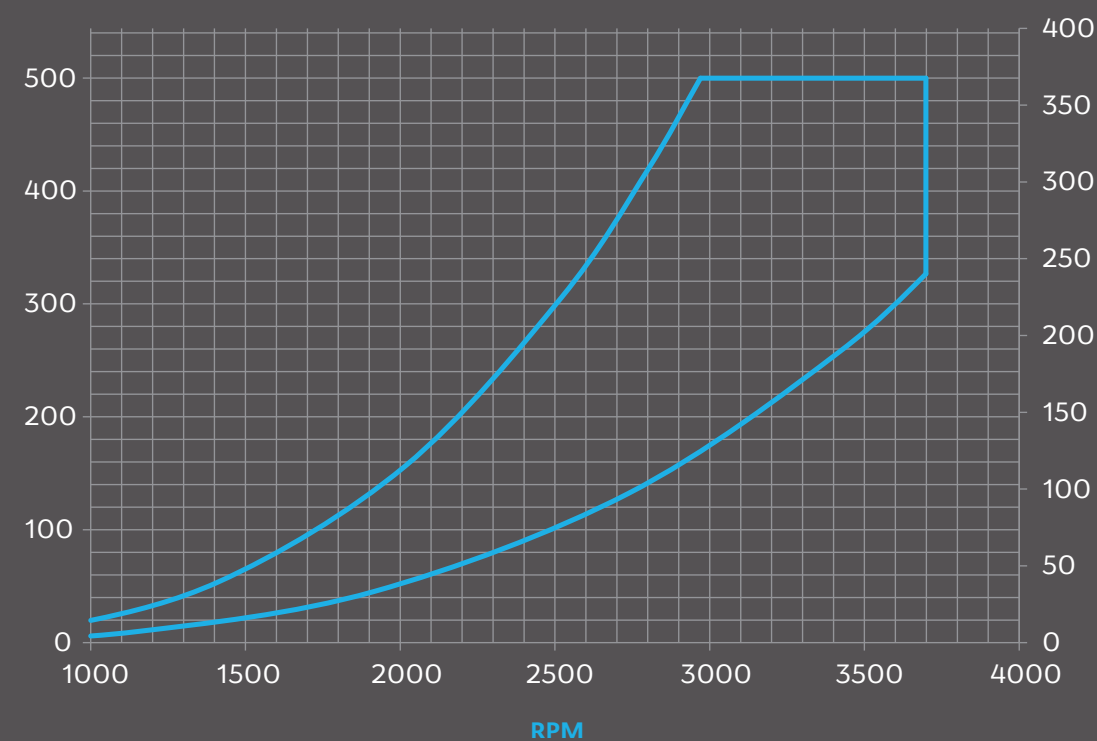


**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC OR
SIGMA CONTROLS



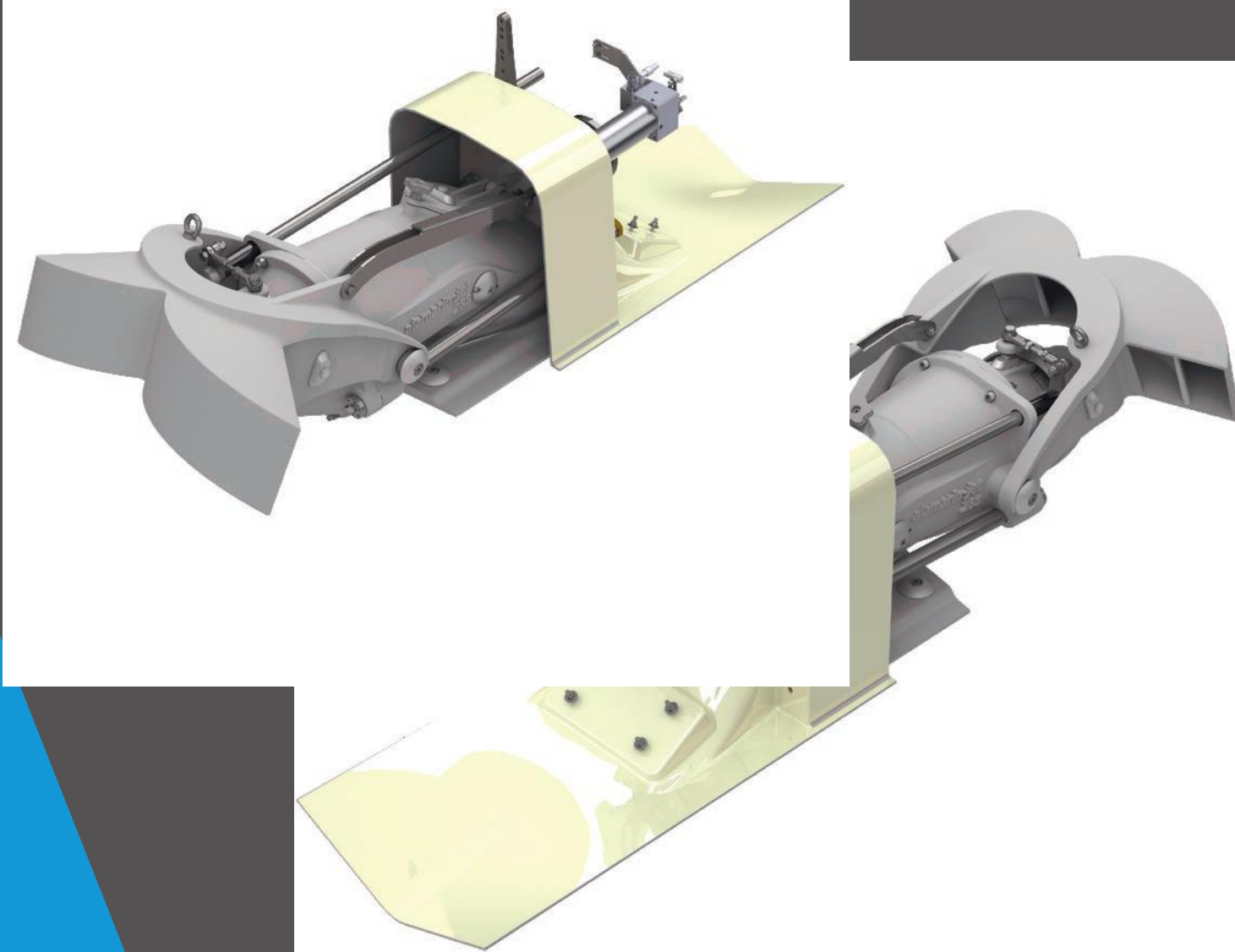
AJ 285 POWER/RPM COVERAGE

POWER [KW]



POWER [HP]

AJ 288



Grease/Water
lubricator rear
bearing
options

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



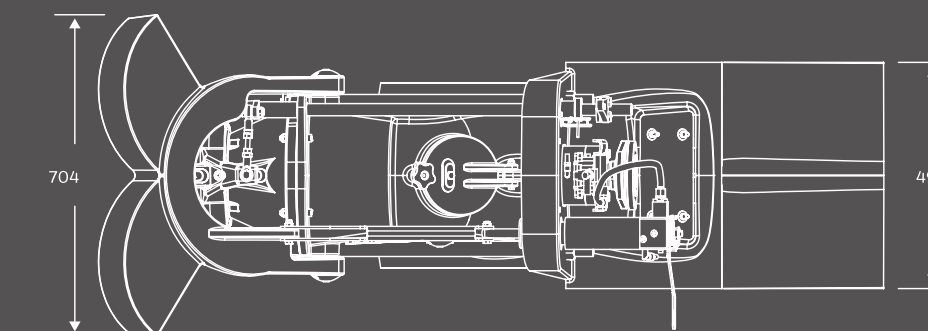
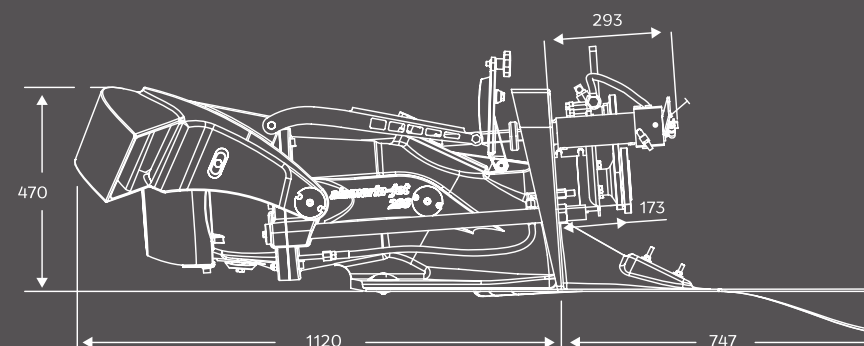
IMPELLER SHAFT RPM
MAX. 3700 1/MIN



**MAX. VESSEL
DISPLACEMENT**
5000 KG (11 000 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
120 KG
(265 LBS)



IMPELLER DIAMETER
MAX. 288 MM
(11.3")



MAX INPUT POWER
330 KW
(450 MHP)

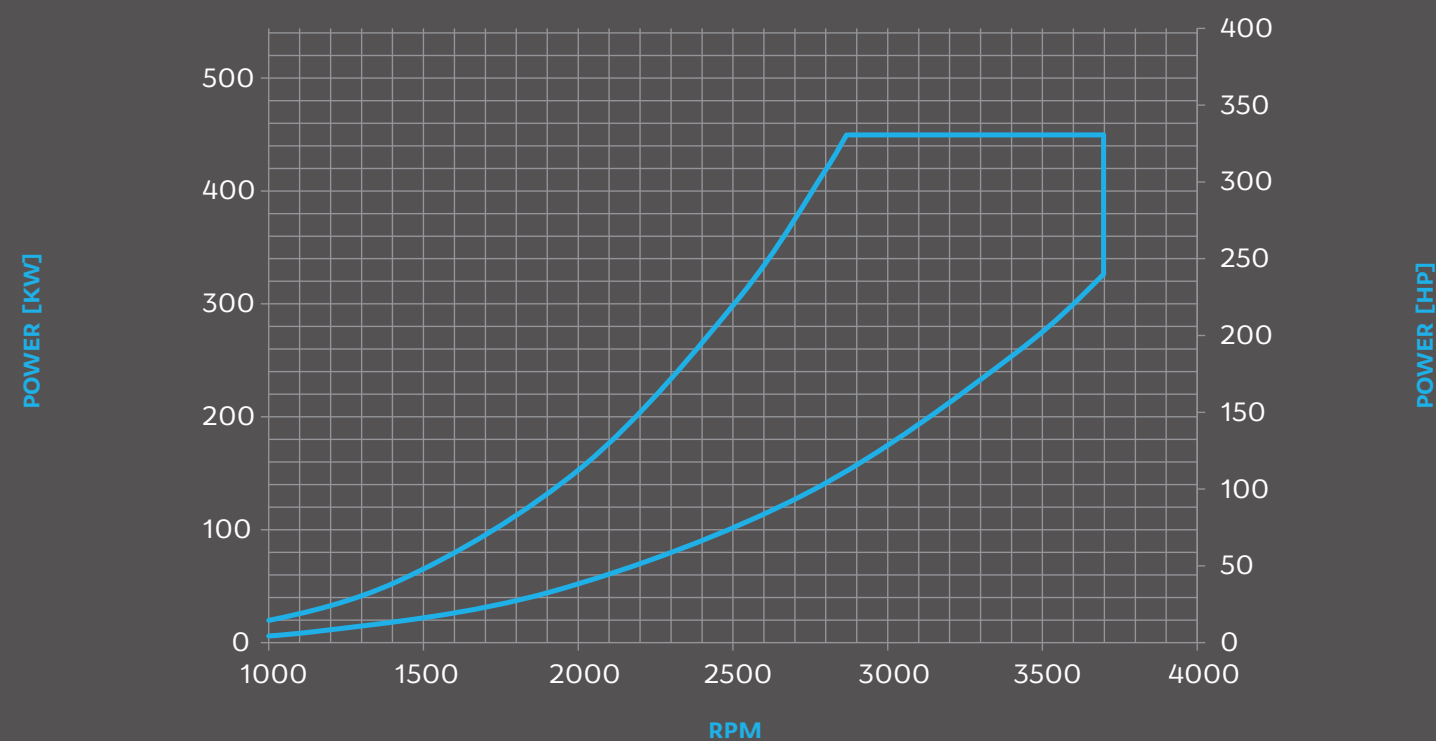


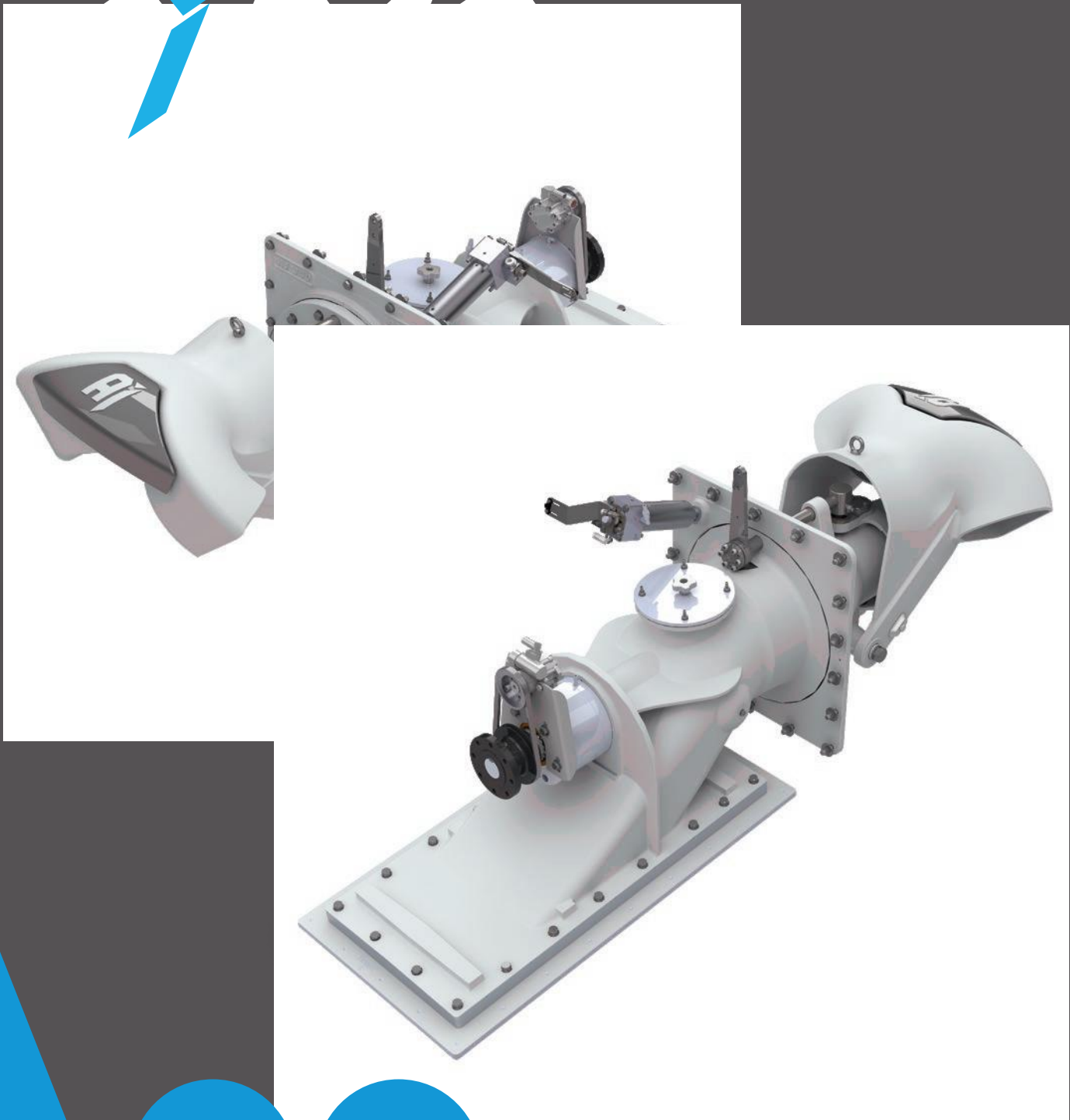
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC

AJ 288 POWER/RPM COVERAGE





0-deg & 5-deg
installation
options

Integrated
oil cooler

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



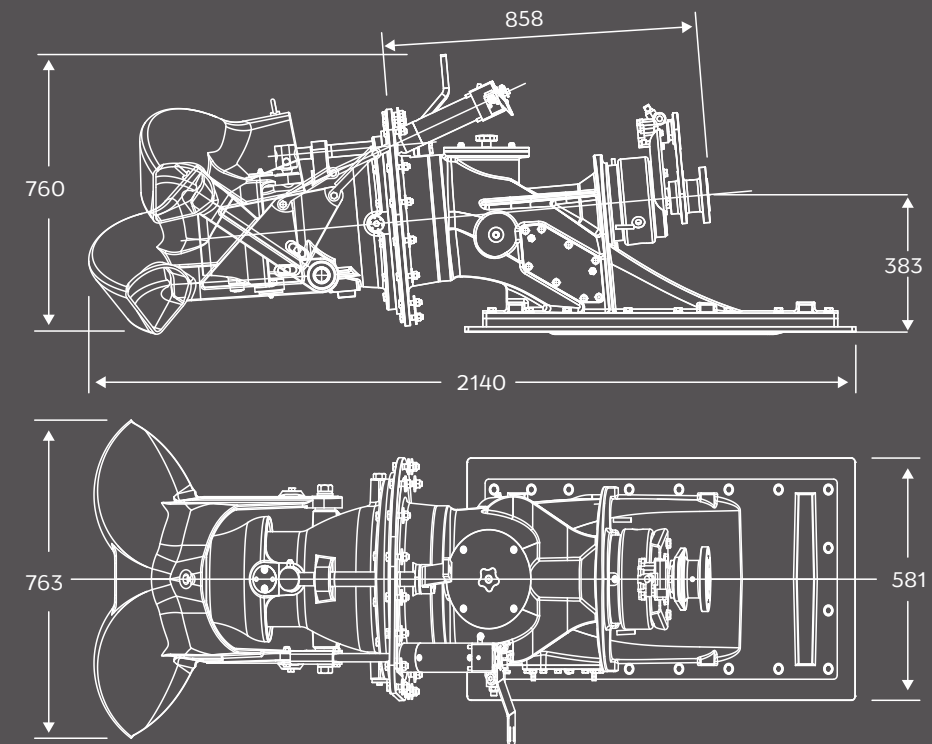
IMPELLER SHAFT RPM
MAX. 3300 1/MIN



**MAX. VESSEL
DISPLACEMENT**
7500 KG (16 535 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
245 KG
(540 LBS)



IMPELLER DIAMETER
MAX. 335 MM
(13.2")



MAX INPUT POWER
550 KW
(750 MHP)

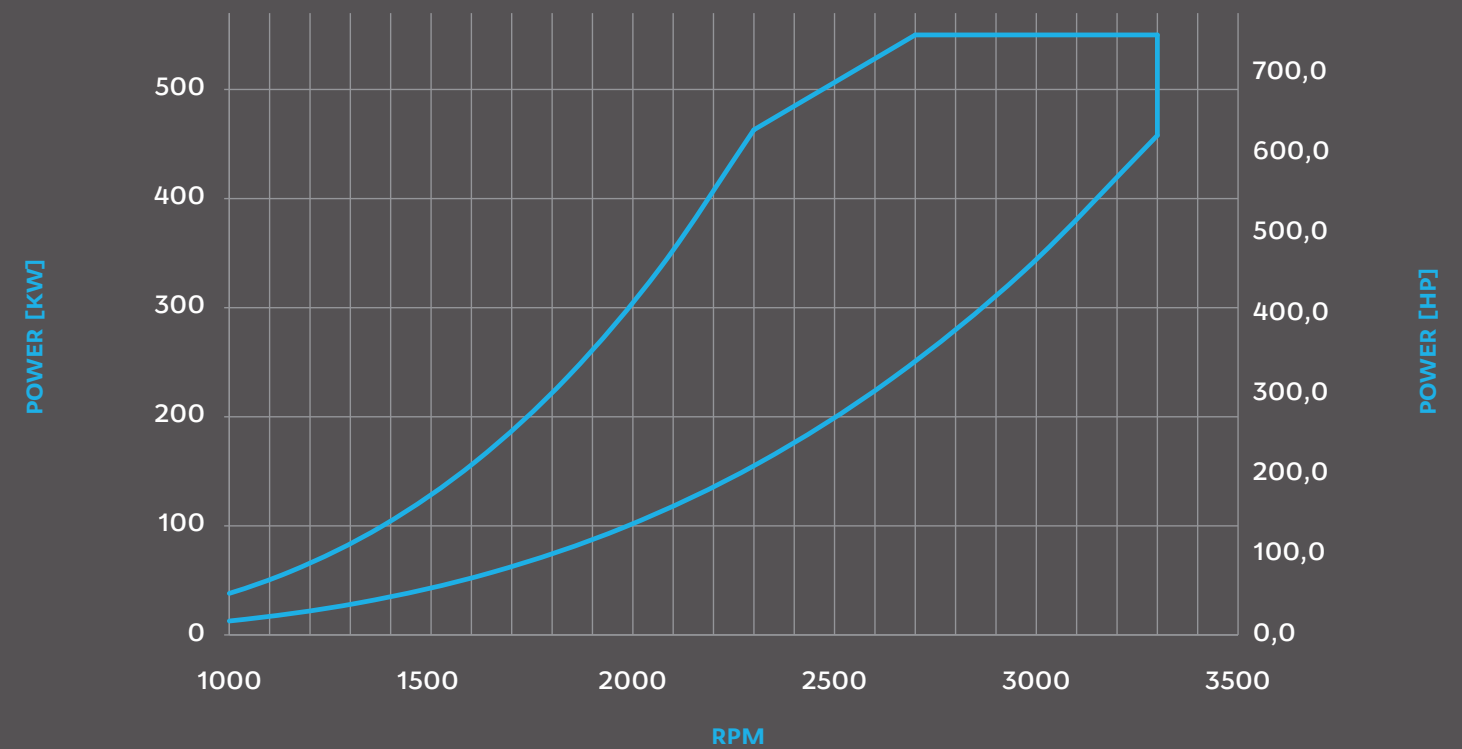


JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC OR
SIGMA CONTROLS

AJ 340 POWER/RPM COVERAGE



Omega 37



range epitomises Alamarin-Jets dedication to user-focused, highly efficient and innovative design.

DAS:
0-deg & 4-deg
shaft options

Integrated
SIGMA
controls

FIBS:
Frame
Integrated
Bearing
Structure

MIG:
Modular Intake
Geometry

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



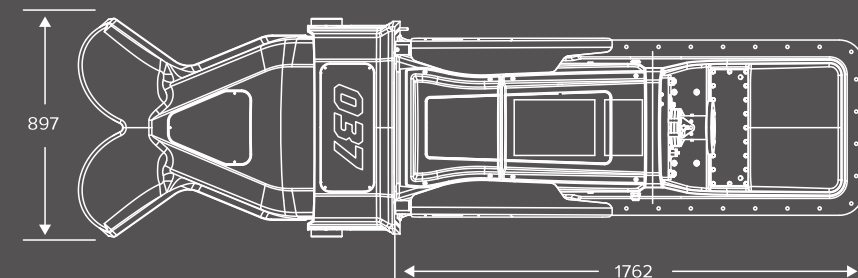
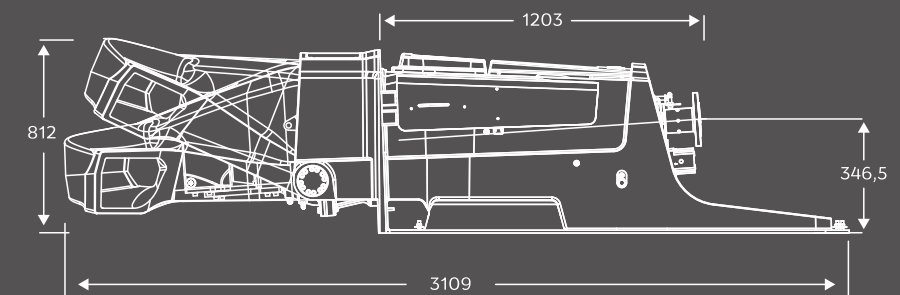
IMPELLER SHAFT RPM
MAX. 2550 1/MIN



**MAX. VESSEL
DISPLACEMENT**
15 000 KG (33 000 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
725 KG
(1600 LBS)



IMPELLER DIAMETER
MAX. 430 MM
(16.9")



MAX INPUT POWER
880 KW
(1200 MHP)

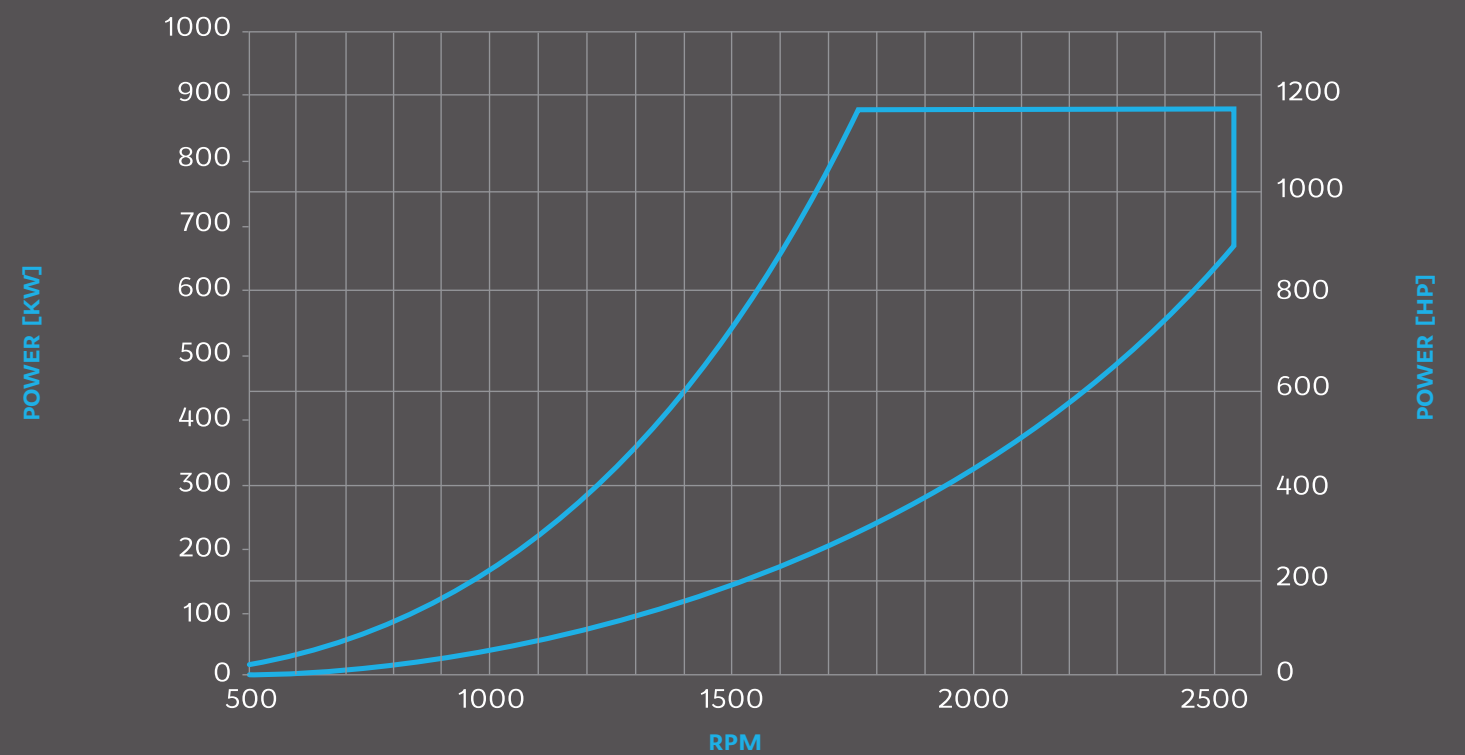


JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC OR
SIGMA CONTROLS

AJ OMEGA 37 POWER/RPM COVERAGE



A/Ω42



DAS:
0-deg & 4-deg
shaft options

Integrated
SIGMA
controls

FIBS:
Frame
Integrated
Bearing
Structure

MIG:
Modular Intake
Geometry

SPECS



PUMP TYPE
MIXED FLOW,
SINGLE STAGE



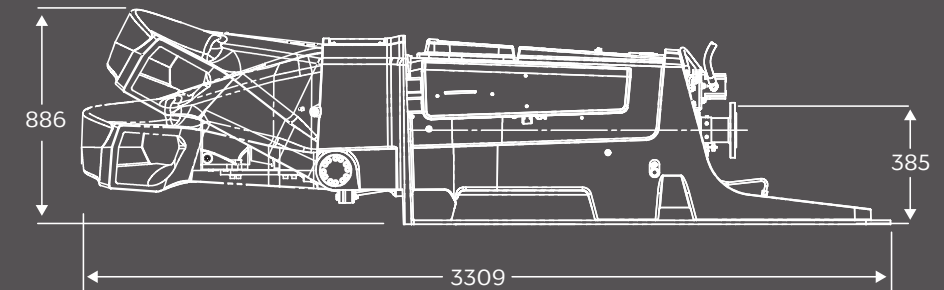
IMPELLER SHAFT RPM
MAX. 2300 1/MIN



**MAX. VESSEL
DISPLACEMENT**
24 000 KG (53 000 LBS)
PER JET UNIT
(PLANING VESSEL)



JET WEIGHT
815 KG
(1796 LBS)



IMPELLER DIAMETER
MAX. 480MM
(18.9")



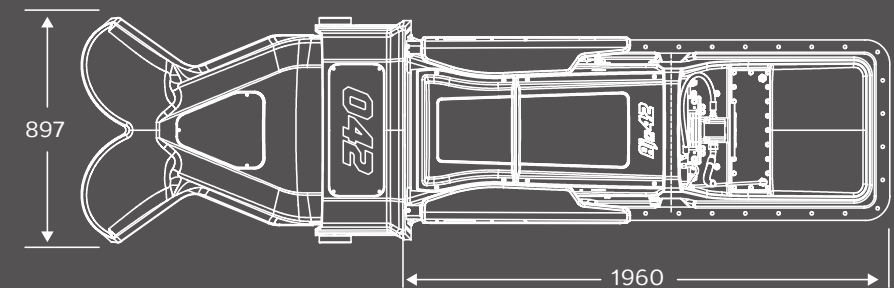
MAX INPUT POWER
1500 KW
(2040 HP)



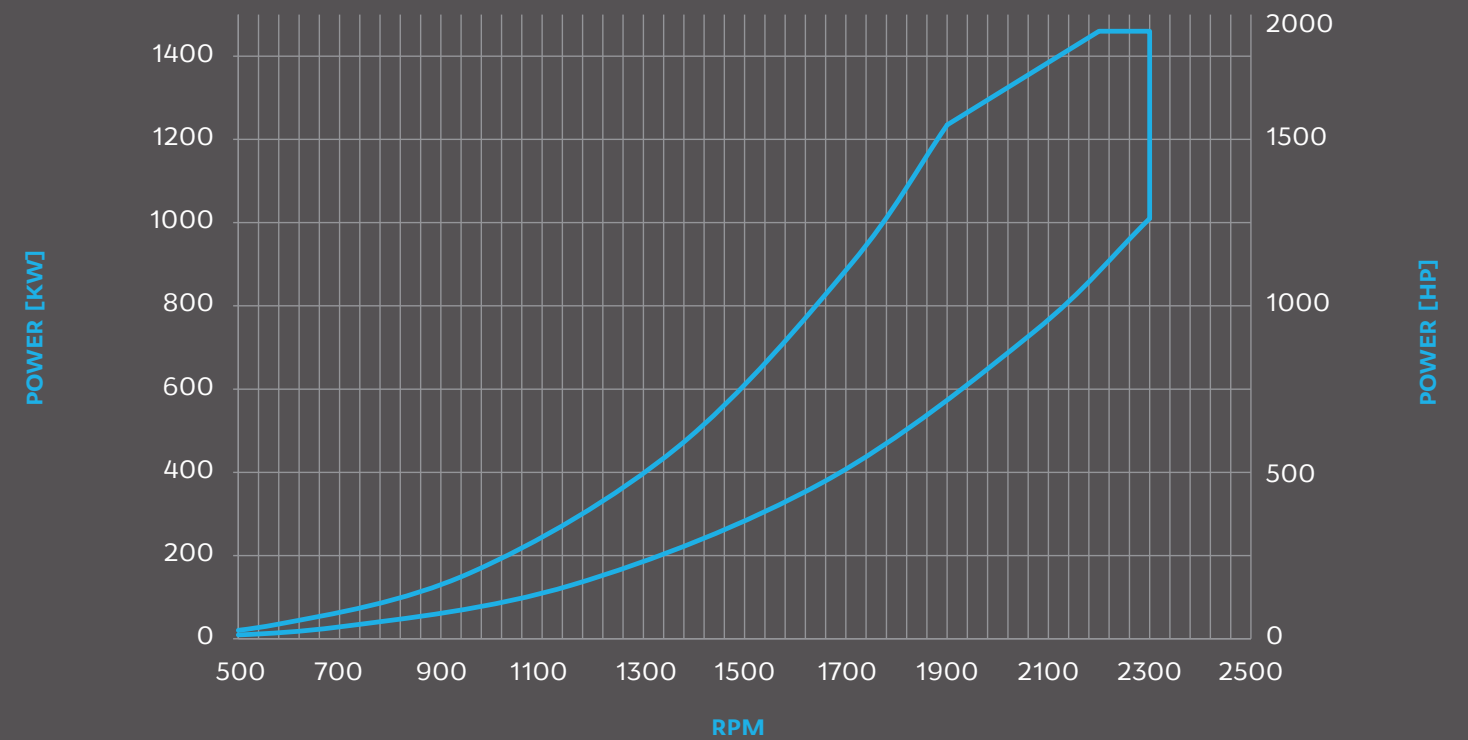
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL



**REVERSE DEFLECTOR
CONTROL**
HYDRAULIC OR
SIGMA CONTROLS



AJ OMEGA 42 POWER/RPM COVERAGE



AI ACU

The Actuator Control Unit System or ACU System is a modular propulsion control system designed to be adaptable for multiple configurations with simple selection of modular components.

The ACU system can be used to control the waterjet deflector(s), as well as engine throttle and gearbox engagement.

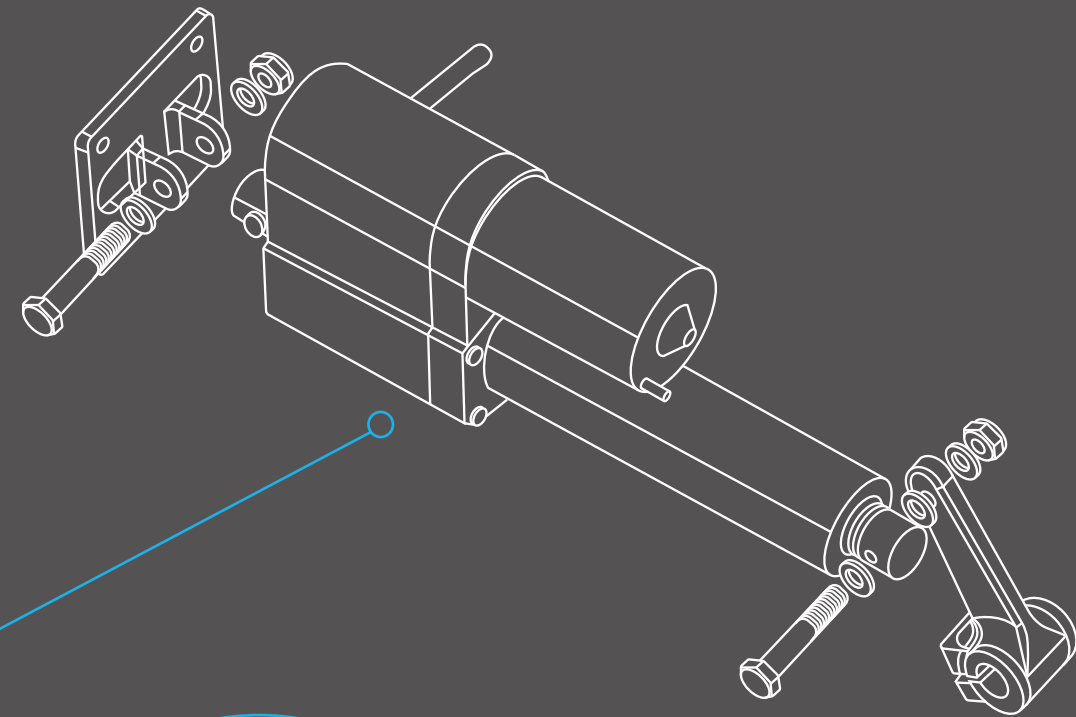
The main unit in the system is the ACU itself.

The ACU is a controller box which can be connected to 3 different actuators depending on its role within the overall system.

The ACU can accept an analogue voltage signal (typically 0-5v), a CAN signal, or a mechanical input from Morse cable via the built in potentiometer.

The ACU can be configured via the integrated button and 'traffic light' LED's or via ACU Service tool available for mobile platforms.

ACU Service Tool (mobile app)

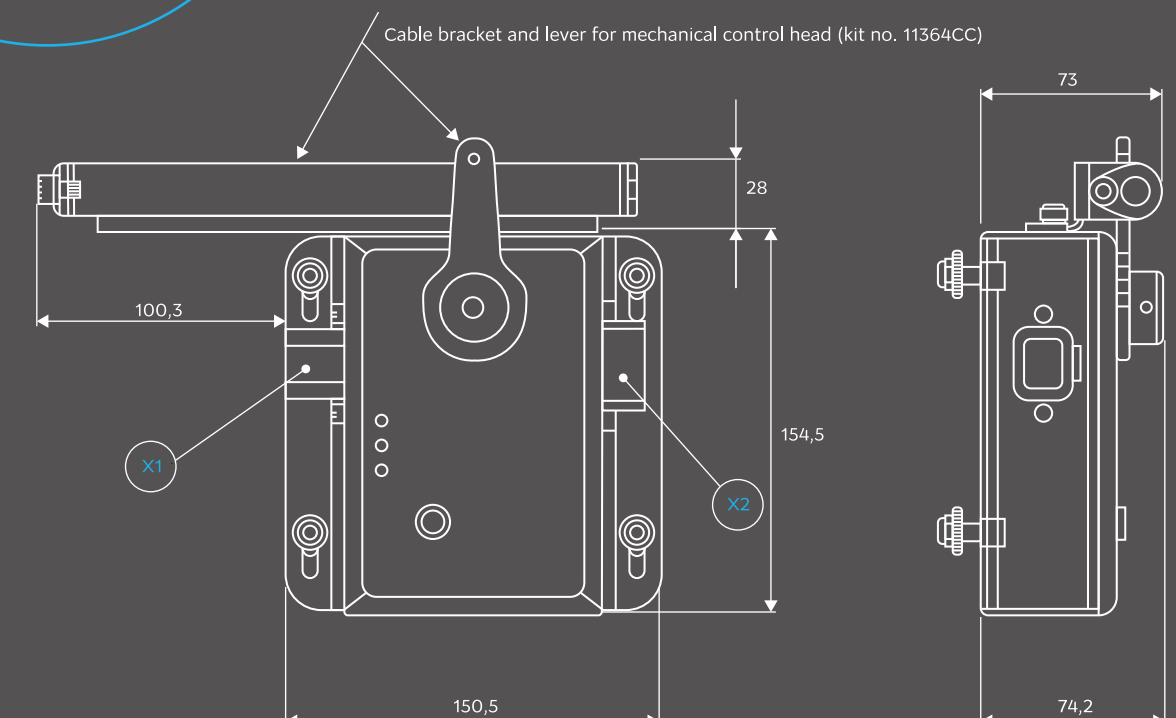
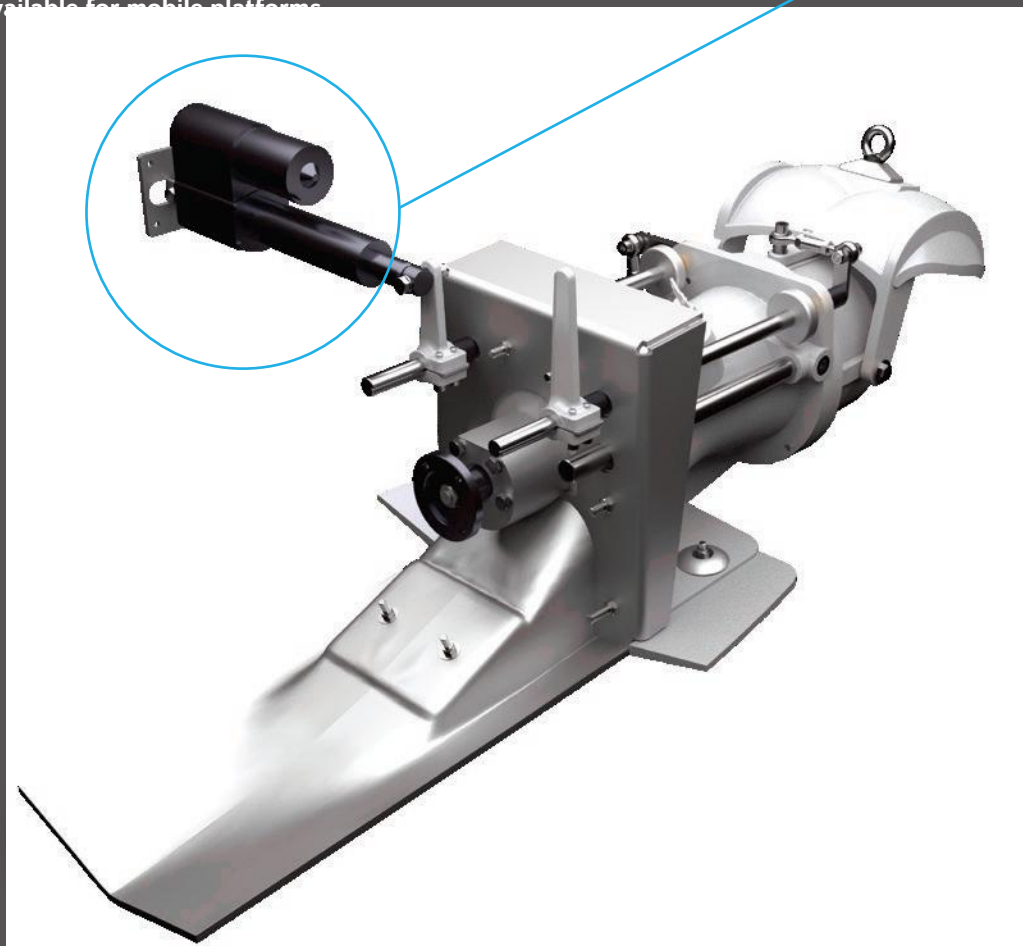


X1

OVDC
+12VDC
Actuator neg
Actuator pos

X2

Pot. 1 GND
Pot. 1 signal
Pot. 1 +5VDC
CAN-L
CAN-H
Alarm
Actuator pot GND
Actuator pot signal
Actuator pot +5V
Pot. 2 GND
Pot. 2 signal
Pot. 2 +5VDC



AJ SIGMA CONTROLS

AND INTELLIGENT DYNAMICS

Alamarin-Jet SIGMA Control is an electro-hydraulic integrated drive-by-wire control system. It supports installations from single to quadruple waterjets. The system is based on modular architecture and the level of features depends on the modules integrated based on the user requirements.

In addition to the standard configuration of Sigma Controls, AJ Intelligent Dynamics is also available as an add-on feature. AJ Intelligent Dynamics has been developed with future markets and industries at its core, such as effortless and straightforward integration with 3rd party autonomous and unmanned systems. Intelligent Dynamics also features highly sophisticated position and heading keeping functions which give significant operational benefits to a wide variety of vessel types and applications.

INTELLIGENT DYNAMICS IS THE GROUP OF FEATURES INCLUDING:

- Intelligent Position Hold (DPS)
- Intelligent Vessel Anchor (ANC)
- Intelligent Heading Keeping (HDG)



3-AXIS
DOCKING JOYSTICK

COMPUTING
DISPLAY UNIT

TWIN THRUST LEVER

E-HELM



TECHNICAL:

The SIGMA Control system is built on a CAN network, the core of the system being the Jet Controller Units (JCU) and Helm Control Units (HCU) being connected via a standardised cable system. Each Jet has its own independent JCU and individual control hydraulics for increased redundancy. Each JCU works also as an individual control network node (CAN Bus). The primary BUS system is capable to carry both, electric power for each JCU node and network communications.

In the case of twin installation and upwards, two electrically separated primary BUS lines are used to increase the redundancy level. All primary control heads are capable to deliver isolated dual output. Each Control Head axis of movement has two electronically separated circuits, making each propulsion line truly separated and independent. Any single point of failure does not affect to another Primary BUS propulsion line.

- Modular and scalable architecture – From single installation up to
- Multiple control stations
- Multiple control head arrangement options
- Flexible BUS architecture – each jet unit acts as an individual BUS
- Factory made modular cabling system, no custom cables required
- Increased Redundancy – Based on individual drive lines and multiple
- 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
- Digital engine interface – Direct digital CAN-CAN Throttle control
- Sophisticated diagnostics – Multiple data logging and diagnostic
- Intelligent self-monitoring system. Temperature, Pressure and Fluid
- USV Ready – Comprehensive low-level (CAN) and high-level (IP) interfaces



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