PRODUCT RANGE

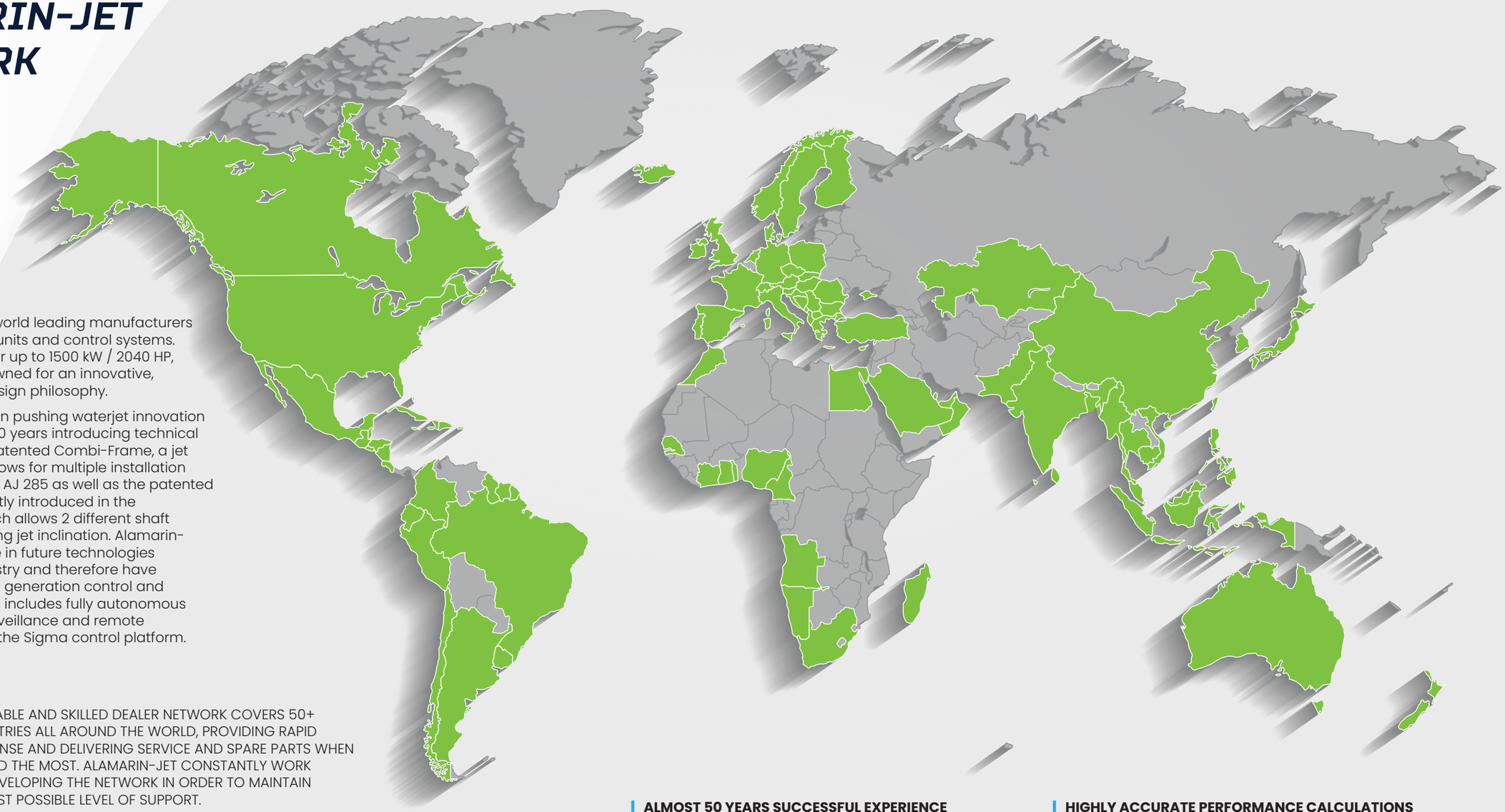
ALAMARIN-JET

ALAMARIN-JET NETWORK

Alamarin-Jet Oy are world leading manufacturers of waterjet propulsion units and control 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 waterjet 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 system, this includes fully autonomous operations, remote surveillance and remote monitoring. All built on the Sigma control platform.

A RELIABLE AND SKILLED DEALER NETWORK COVERS 50+ 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 SUPPORT.



ALMOST 50 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

BEST POWER/SIZE/WEIGHT CHARACTERISTICS IN THE MARKET

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

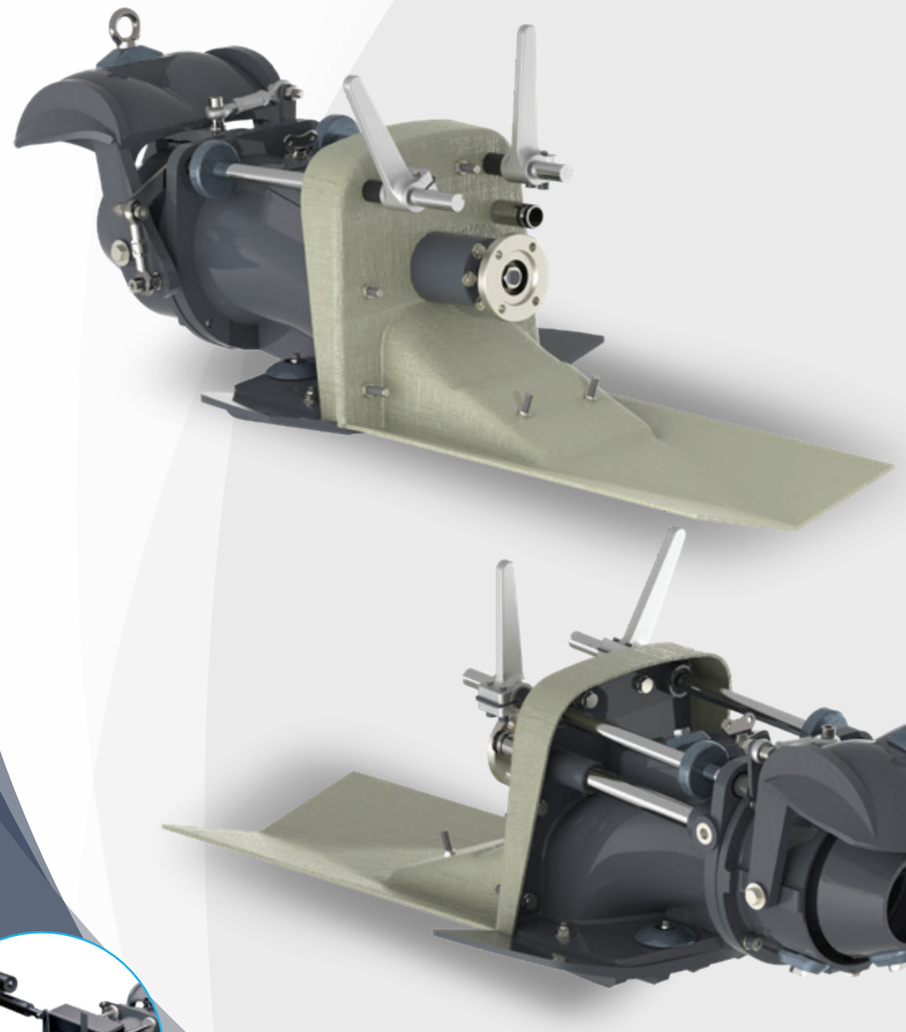
FASTEST PRODUCTION LEAD TIMES IN THE INDUSTRY

COMPANY DEDICATED TO SERVICE AND SUPPORT

DEALER/SERVICE NETWORK IN 50+ COUNTRIES

DIRECT FACTORY SUPPORT FOR ALL CUSTOMERS

AJ 160



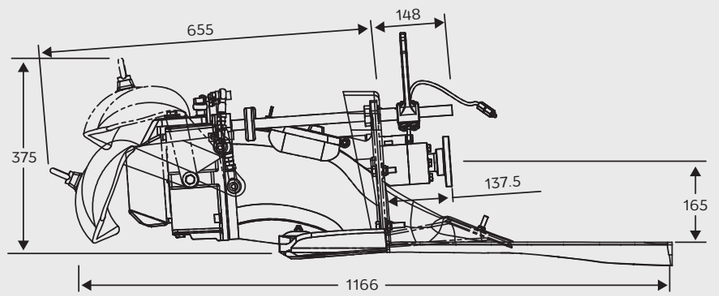
REVERSING DEFLECTOR CONTROL

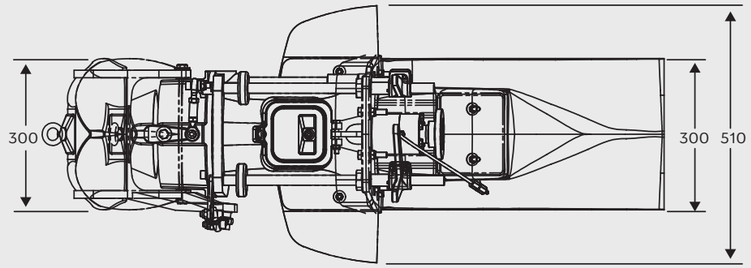
SPECS

PUMP TYPE
MIXED FLOW, SINGLE STAGE

IMPELLER SHAT RPM
MAX. 5000 1/MIN

JET WEIGHT
38 KG
(84 LBS)





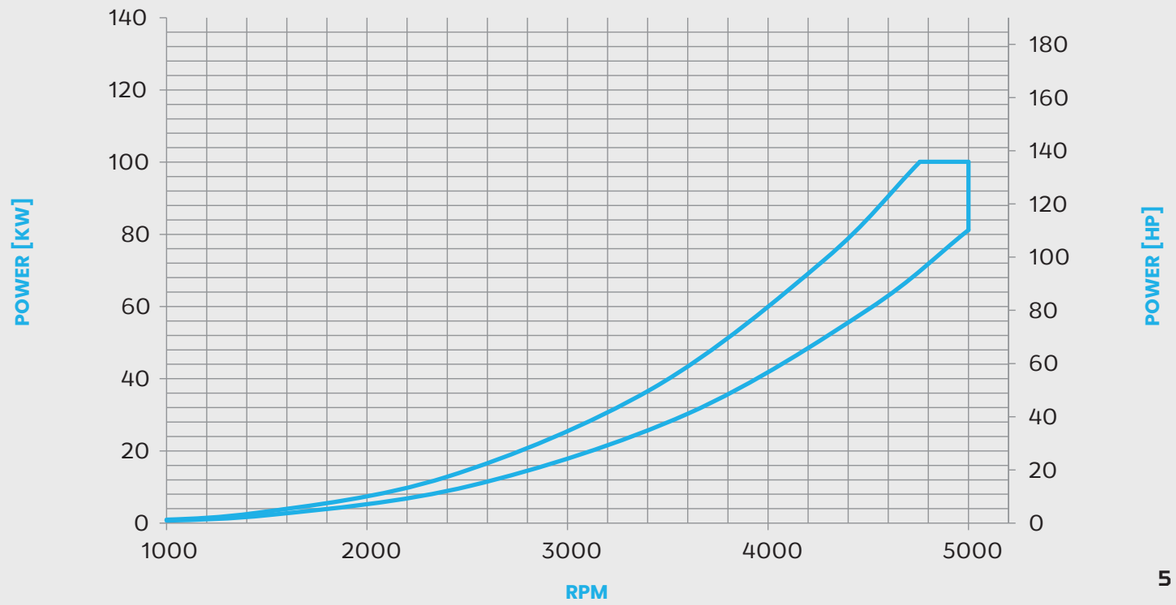
IMPELLER DIAMETER
MAX. 186 MM
(7.3")

MAX INPUT POWER
100 KW
(136 MHP)

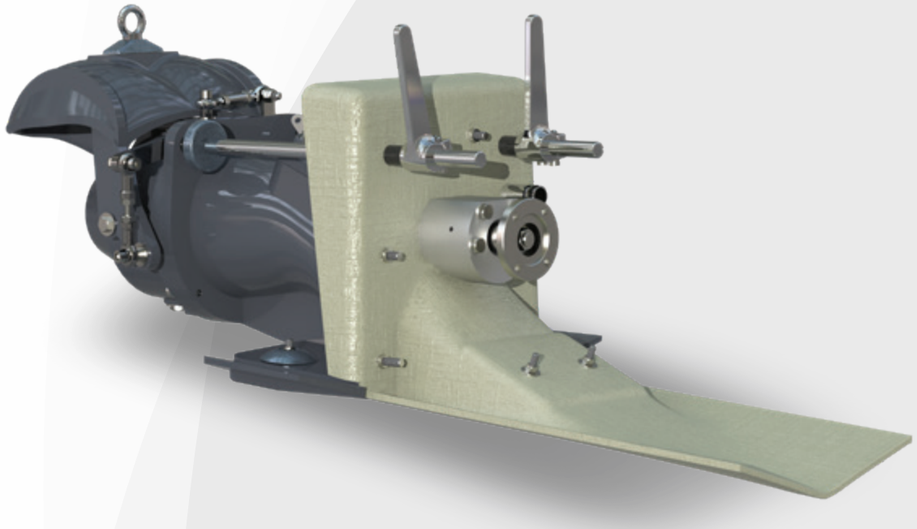
JET CONSTRUCTION
ALUMINIUM, STAINLESS STEEL

REVERSE DEFLECTOR CONTROL
MECHANICAL OR ELECTRICAL (ACU)

AJ 160 POWER/RPM COVERAGE



AJ 180/185



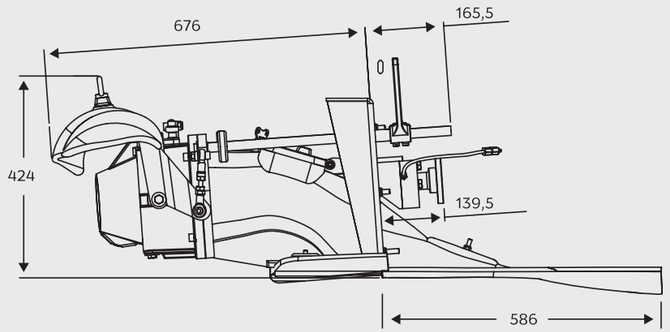
REVERSING DEFLECTOR CONTROL

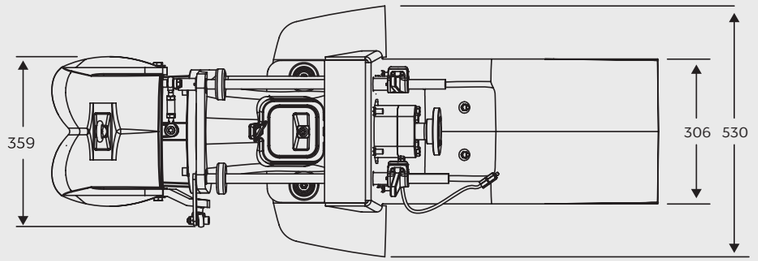
SPECS

PUMP TYPE
MIXED FLOW, SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 5000 1/MIN

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





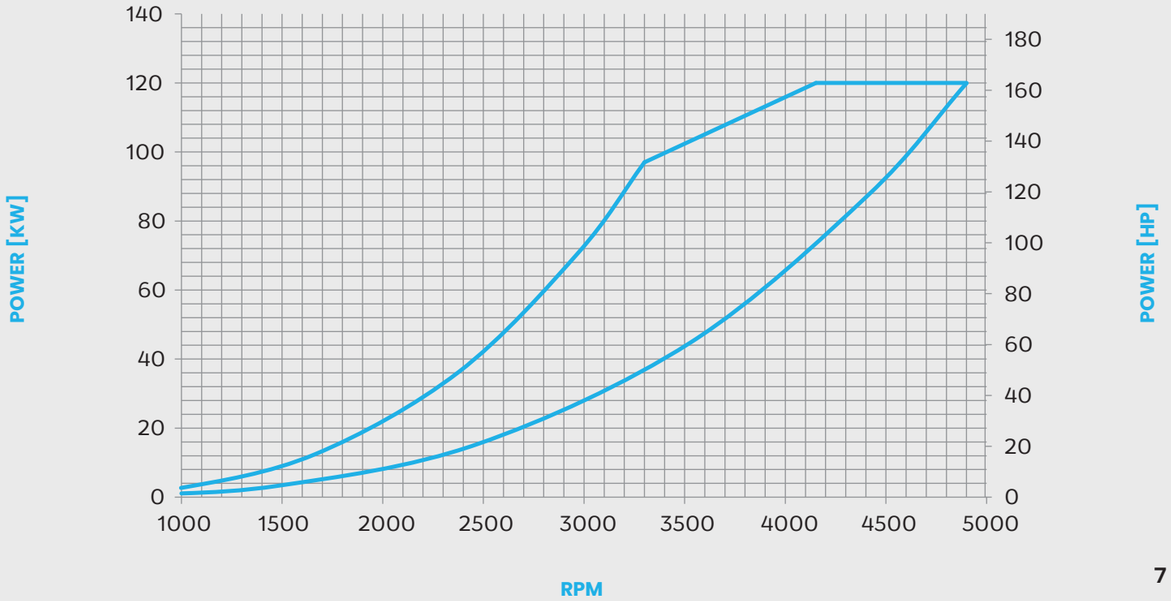
IMPELLER DIAMETER
MAX. 192 / 197 MM
(7.6" / 7.8")

MAX INPUT POWER
120 KW
(163 MHP)

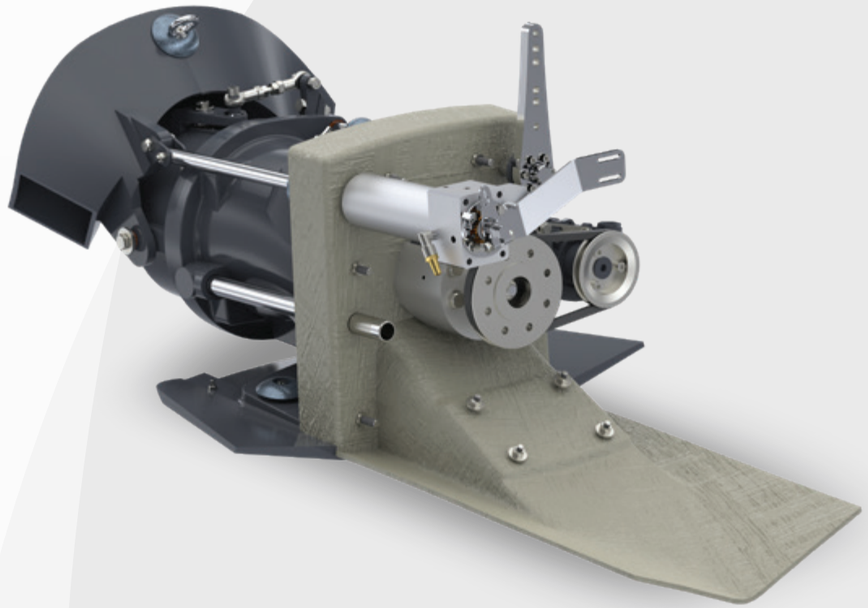
JET CONSTRUCTION
ALUMINIUM, STAINLESS STEEL

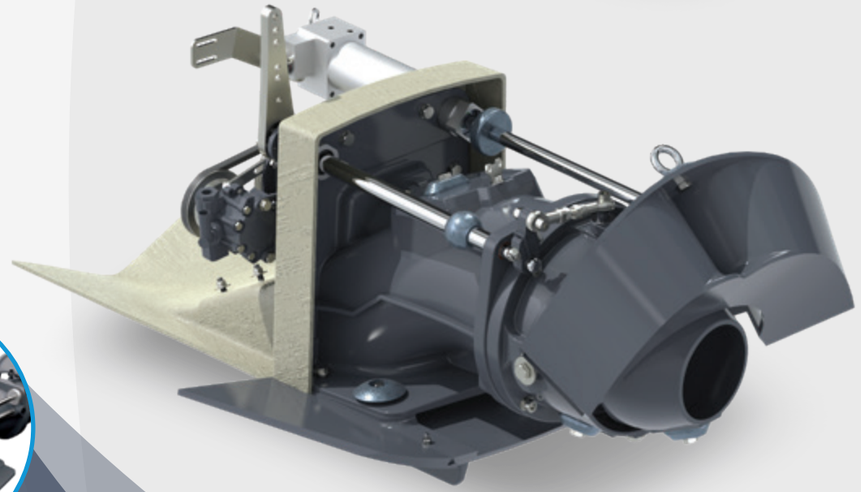
REVERSE DEFLECTOR CONTROL
MECHANICAL OR ELECTRICAL (ACU)

AJ 180/185 POWER/RPM COVERAGE



AJ 230





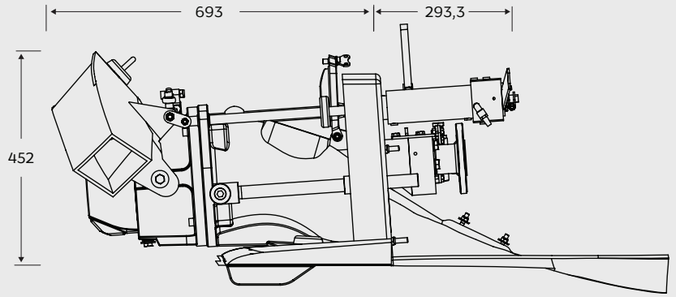
REVERSING
DEFLECTOR
CONTROL

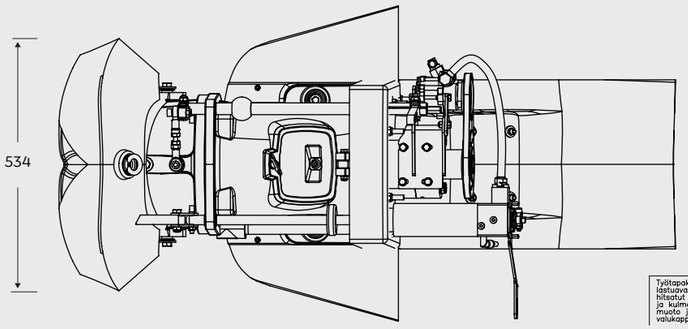
SPECS

PUMP TYPE
MIXED FLOW

IMPELLER SHAFT RPM
MAX. 4600 1/MIN

JET WEIGHT
81 KG / 179 LBS





Työtapakohtaiset toler
lästuava työstö SFS4(
hitsatut rakenteet SF
ja kulmat luokka B,
muoto ja sijaintitoler
valukappaleet SFS-IS(

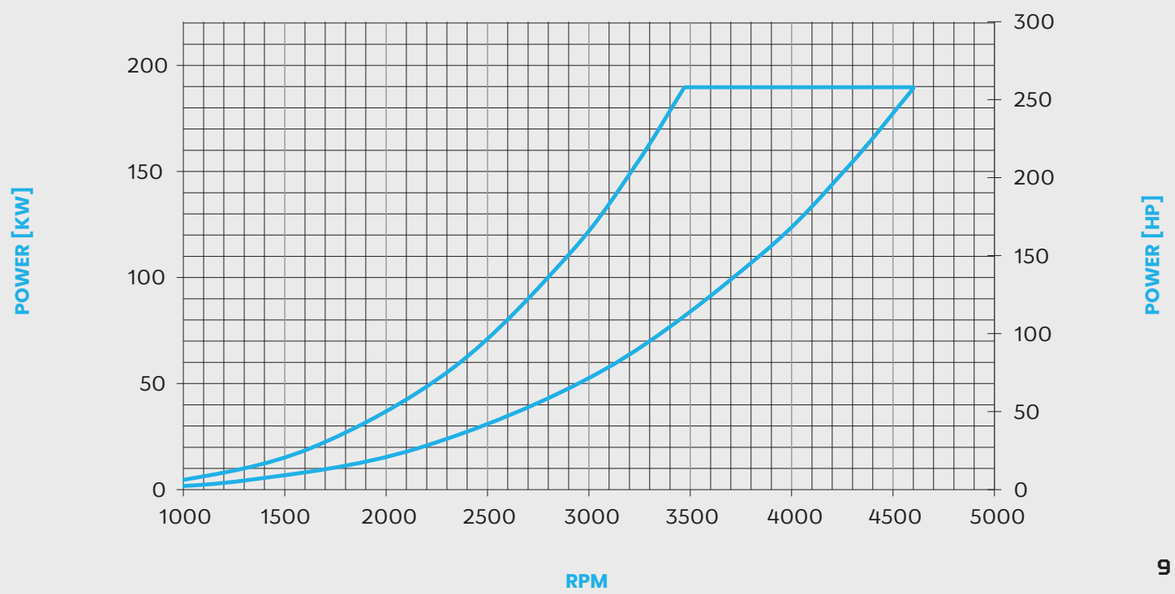
IMPELLER DIAMETER
MAX. 228 MM / 9”

MAX INPUT POWER
190 KW / 260 HP

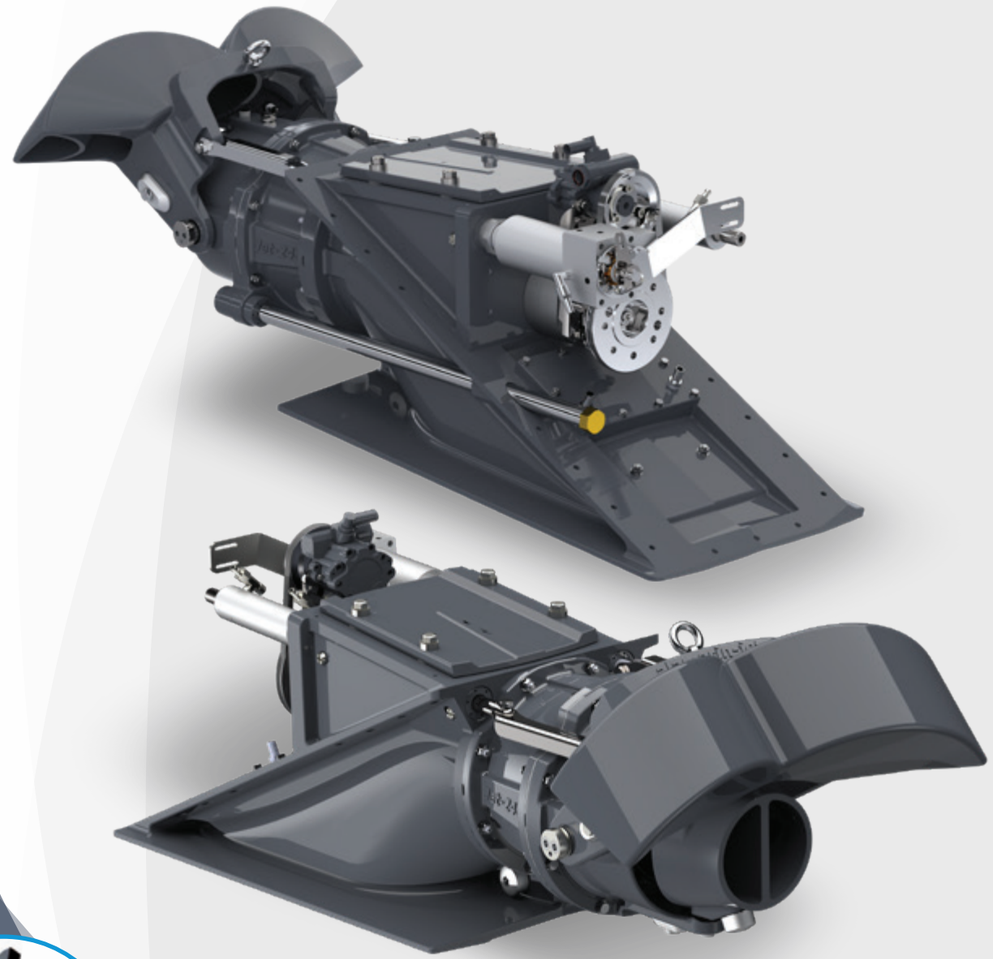
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

REVERSE DEFLECTOR CONTROL
HYDRAULIC

AJ 230 POWER/RPM COVERAGE



AJ 245



TWO INSTALLATION OPTIONS

PATENTED COMBI-FRAME TECHNOLOGY

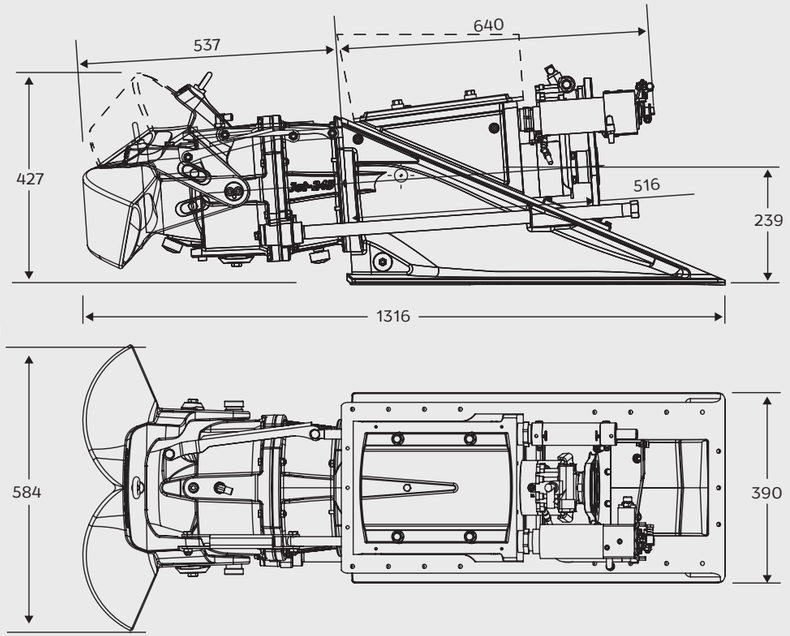
Integrated oil cooler and steering cylinder

SPECS

PUMP TYPE
MIXED FLOW,
SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 4600 1/MIN

JET WEIGHT
95 KG
(209 LBS)



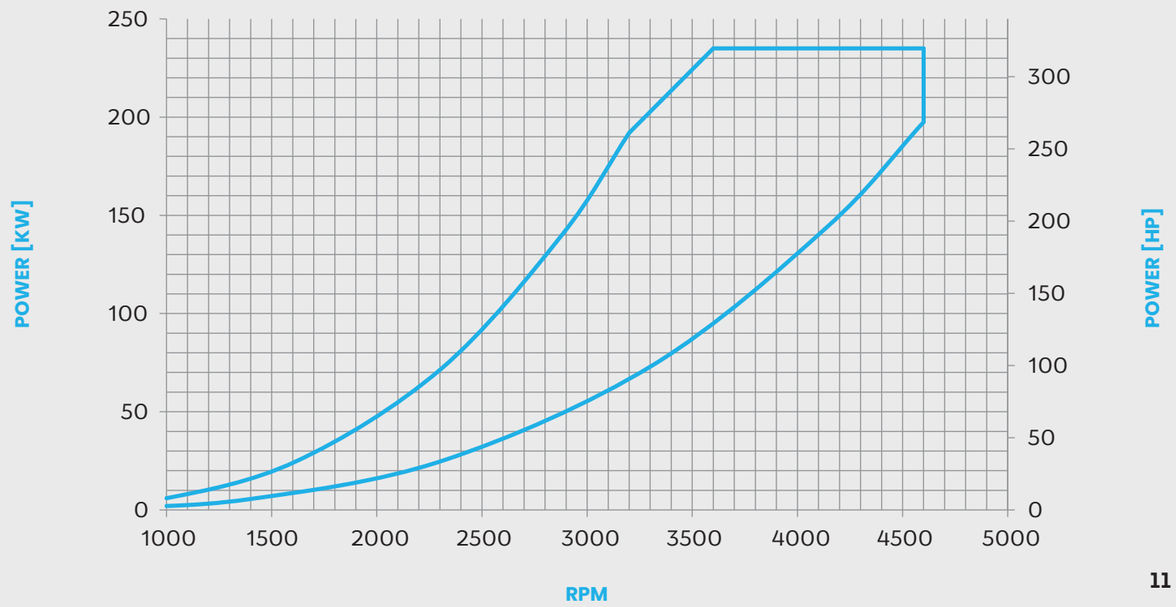
IMPELLER DIAMETER
MAX. 245 MM
(9.6")

MAX INPUT POWER
235 KW
(320 MHP)

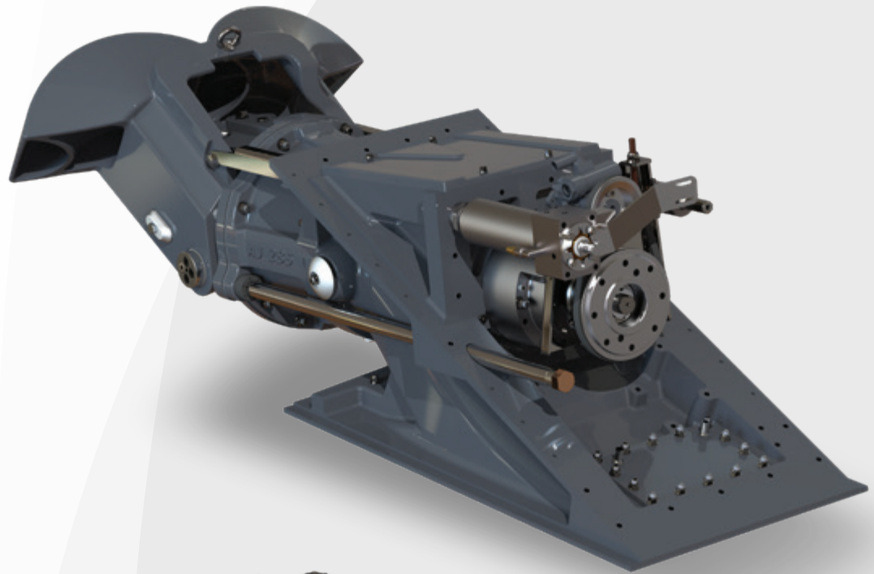
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

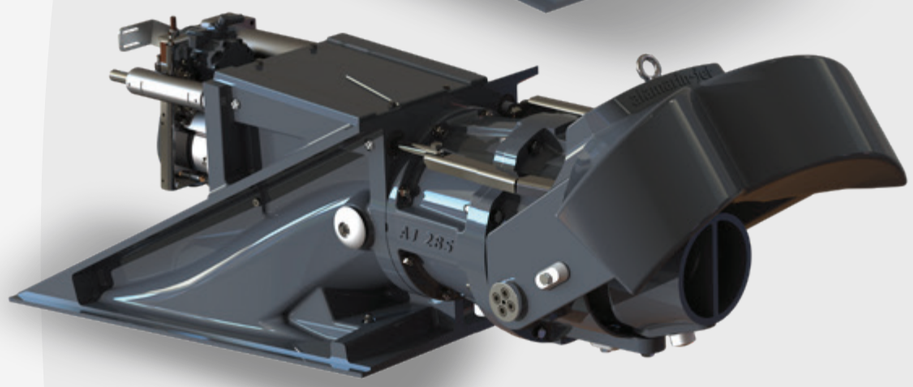
REVERSE DEFLECTOR CONTROL
HYDRAULIC OR
SIGMA CONTROLS

AJ 245 POWER/RPM COVERAGE



AJ 285





TWO INSTALLATION OPTIONS

PATENTED COMBI-FRAME TECHNOLOGY

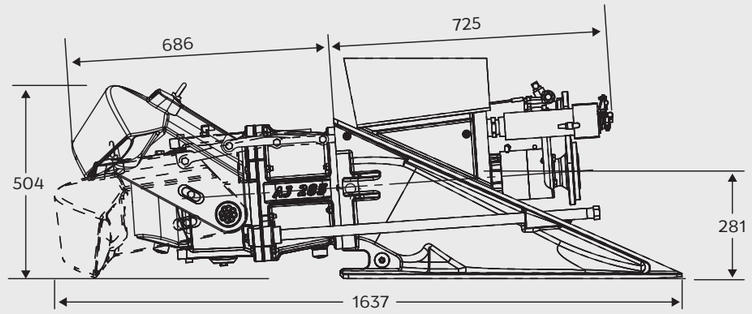
Integrated oil cooler and steering cylinder

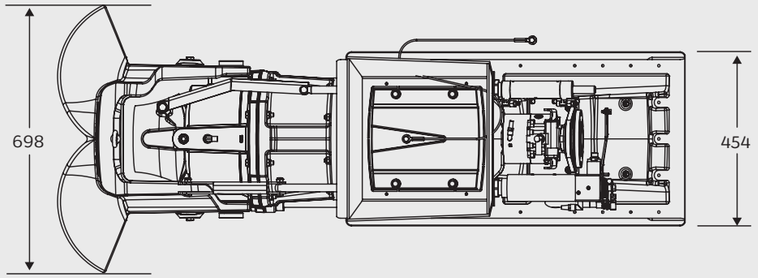
SPECS

PUMP TYPE
MIXED FLOW,
SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 3700 1/MIN

JET WEIGHT
181 KG
(399 LBS)





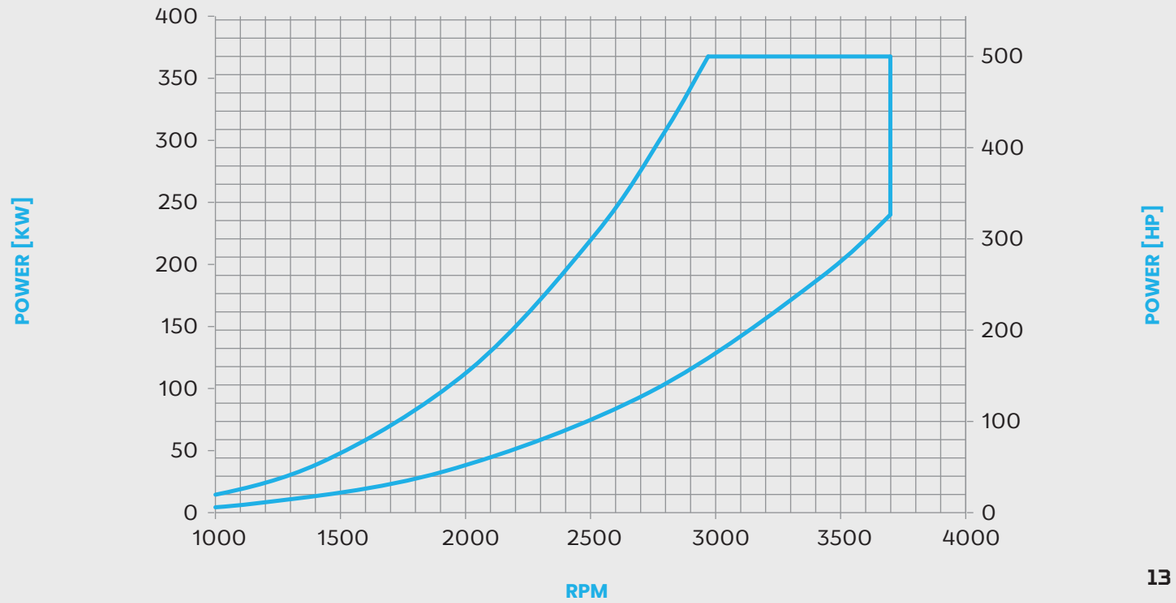
IMPELLER DIAMETER
MAX. 288 MM
(11.3")

MAX INPUT POWER
368 KW
(500 MHP)

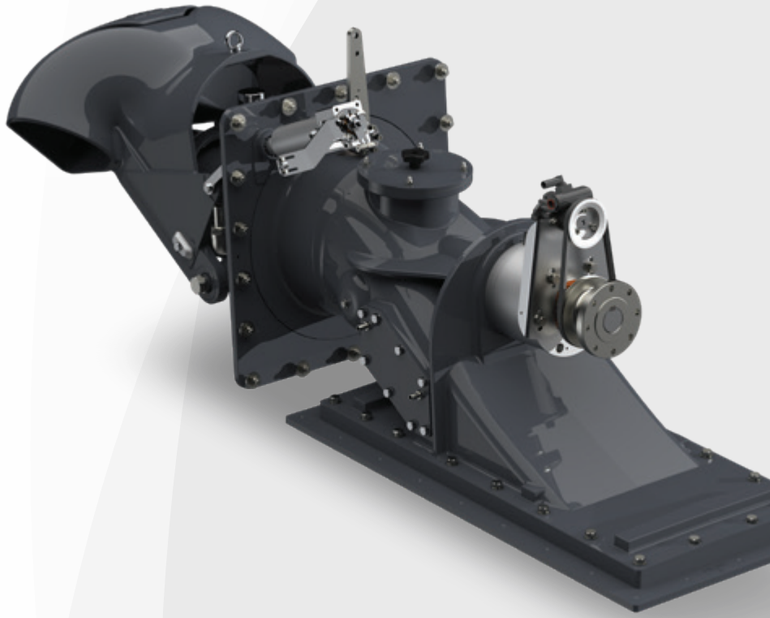
JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

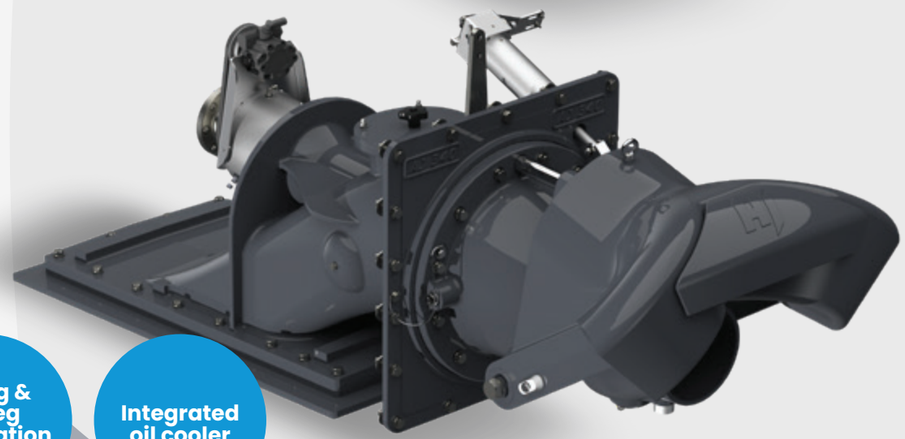
REVERSE DEFLECTOR CONTROL
HYDRAULIC OR
SIGMA CONTROLS

AJ 285 POWER/RPM COVERAGE



AJ 340





0-deg & 5-deg installation options

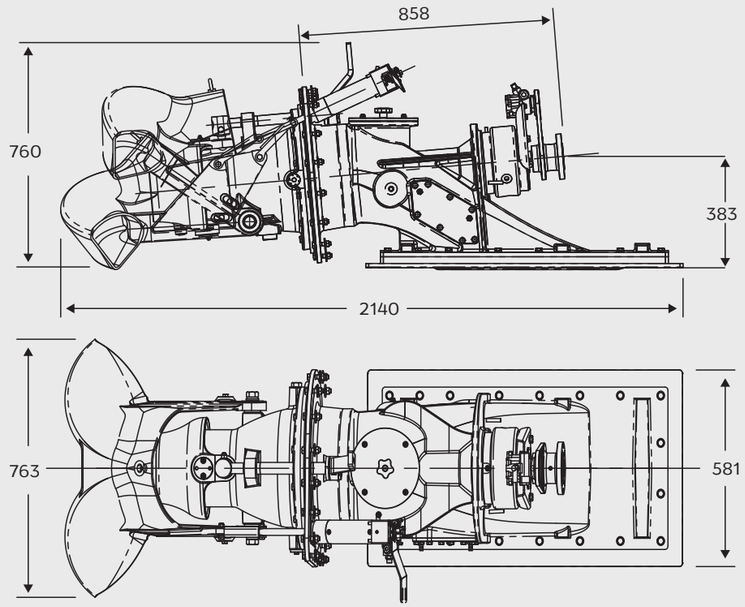
Integrated oil cooler

SPECS

PUMP TYPE
MIXED FLOW, SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 3300 1/MIN

JET WEIGHT
245 KG
(540 LBS)



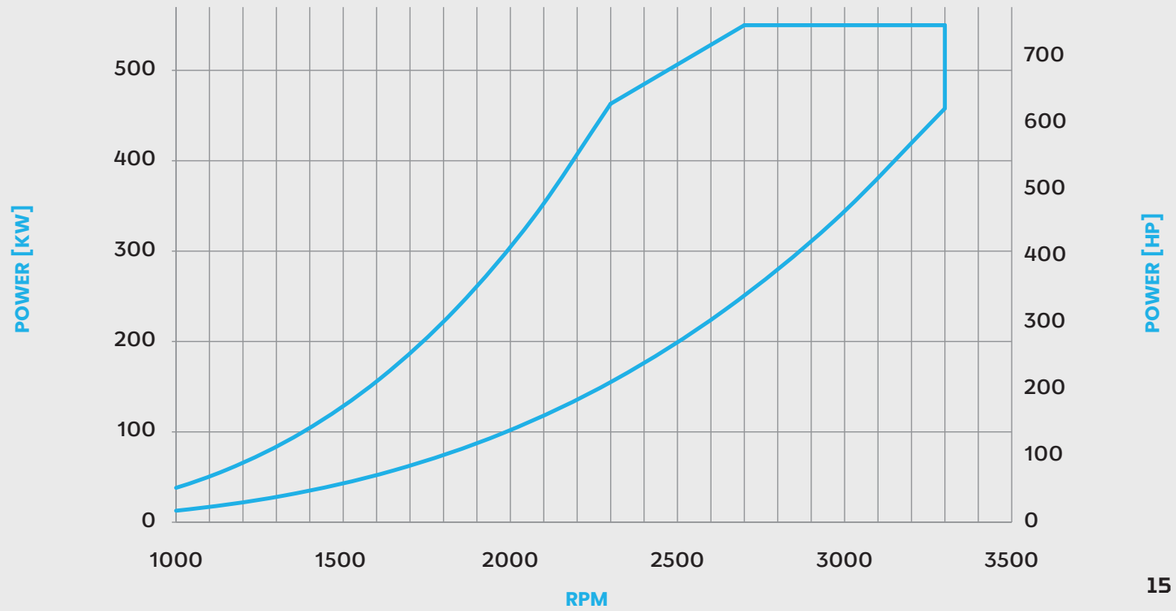
IMPELLER DIAMETER
MAX. 335 MM
(13.2")

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

DAS: 0-deg & 4-deg shaft options

Integrated Sigma Control System

FIBS: Frame Integrated Bearing Structure

MIG: Modular Intake Geometry

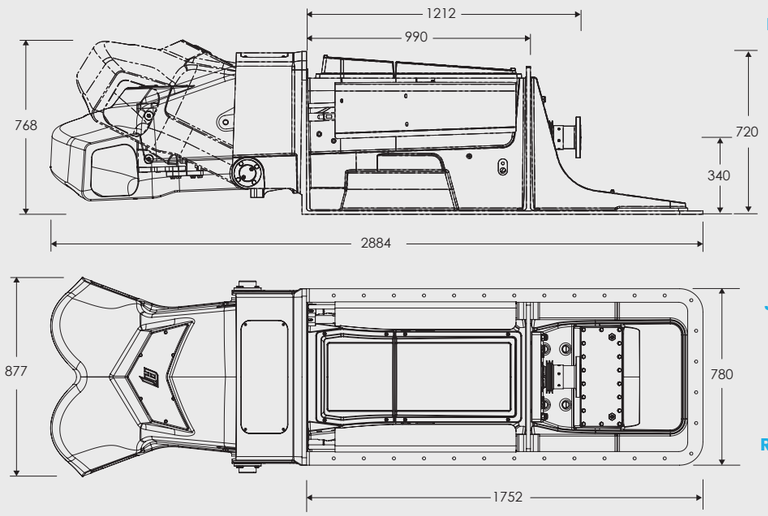
Structural bulkhead adapter

SPECS

PUMP TYPE
MIXED FLOW, SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 2550 1/MIN

JET WEIGHT
700 KG



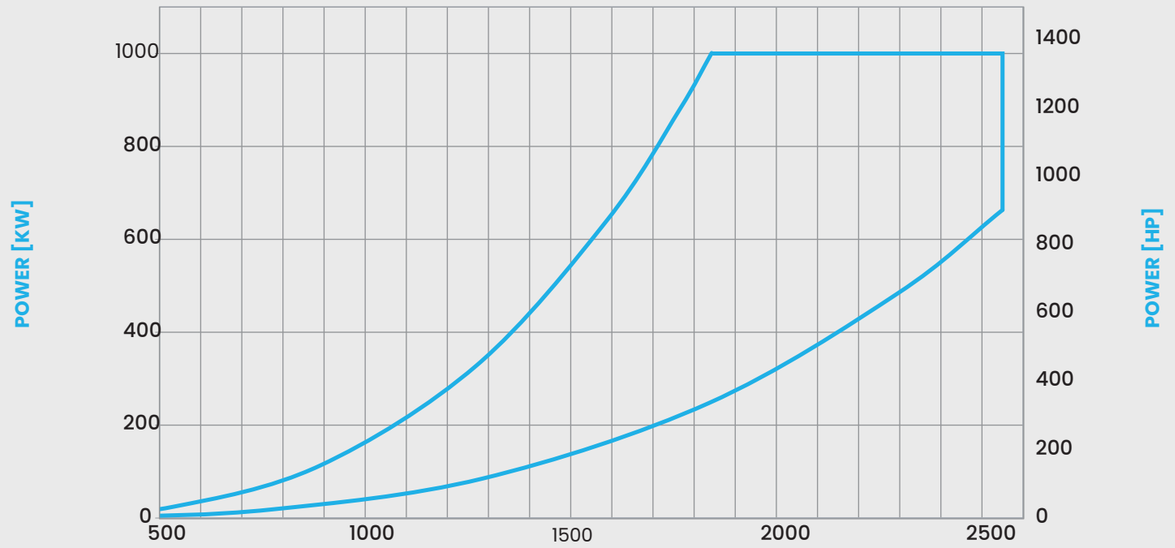
IMPELLER DIAMETER
MAX. 425 MM (16.7")

MAX INPUT POWER
1000KW (1360 HP)

JET CONSTRUCTION
ALUMINIUM, STAINLESS STEEL

REVERSE DEFLECTOR CONTROL
HYDRAULIC OR SIGMA CONTROLS

OMEGA 37 POWER/RPM COVERAGE



Omega 42

DAS:
0-deg & 4-deg
shaft options

Integrated
Sigma
Control
System

FIBS:
Frame
Integrated
Bearing
Structure

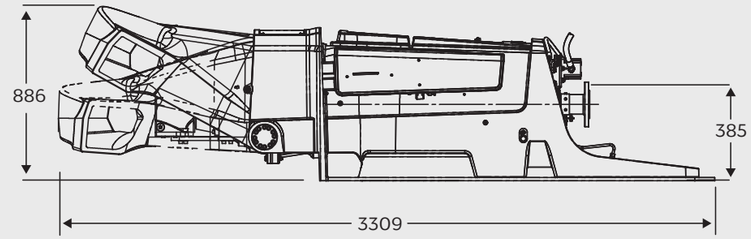
MIG:
Modular Intake
Geometry

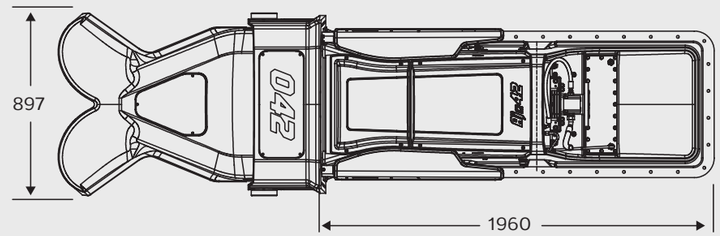
SPECS

PUMP TYPE
MIXED FLOW,
SINGLE STAGE

IMPELLER SHAFT RPM
MAX. 2300 1/MIN

JET WEIGHT
815 KG
(1796 LBS)





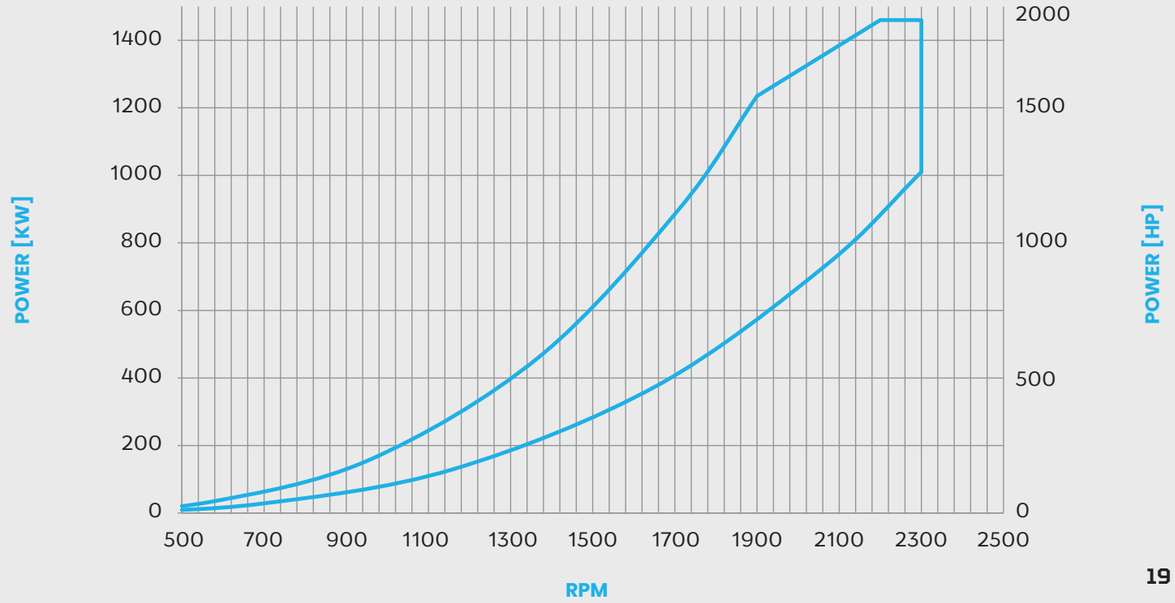
IMPELLER DIAMETER
MAX. 480MM
(18.9")

MAX INPUT POWER
1500 KW
(2040 HP)

JET CONSTRUCTION
ALUMINIUM,
STAINLESS STEEL

REVERSE DEFLECTOR CONTROL
HYDRAULIC OR
SIGMA CONTROLS

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.

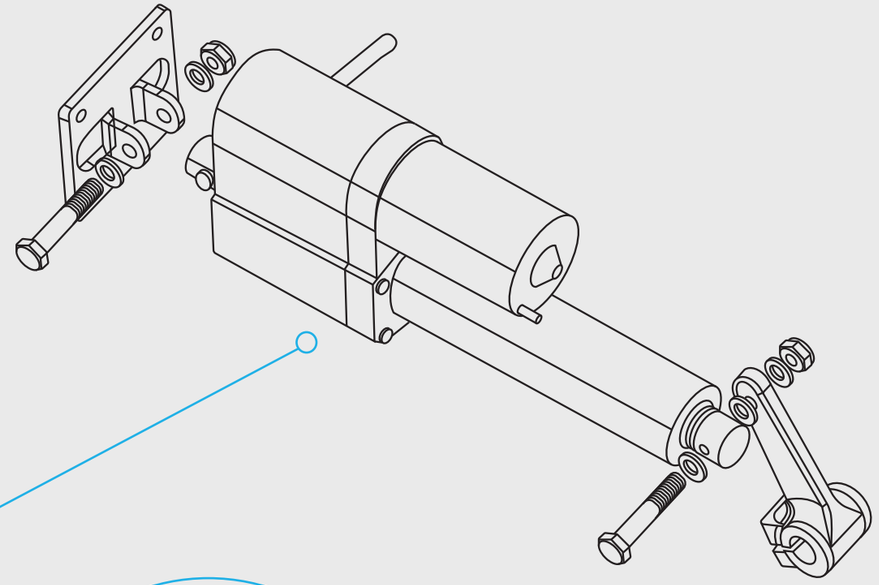
The main unit in the system is the ACU itself.

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

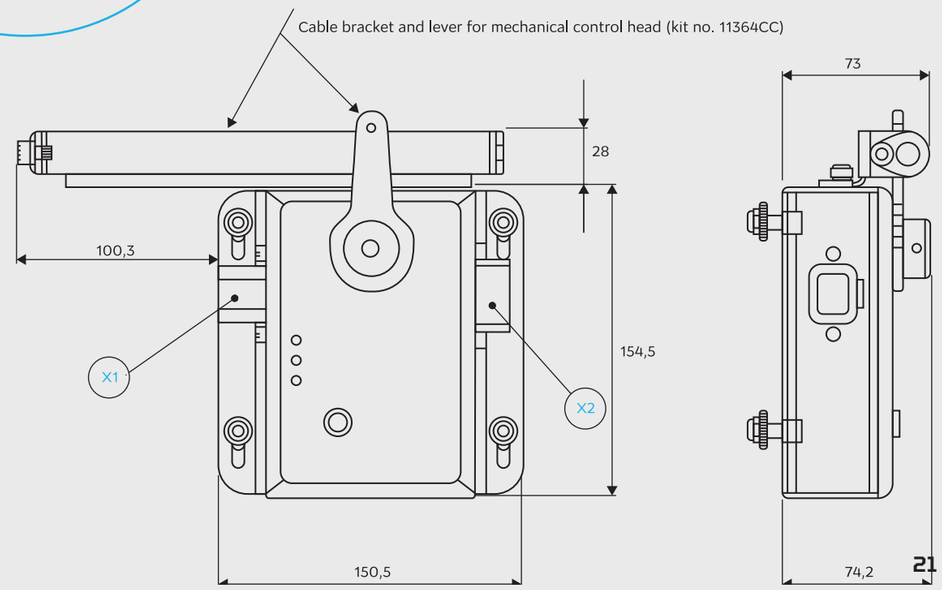
The ACU can accept an analogue voltage signal (typically 0-5v), a CAN signal, or a mechanical input from Morse cable via the built in potentiometer.

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	X2
OVDC	Pot. 1 GND
+12VDC	Pot. 1 signal
Actuator neg	Pot. 1 +5VDC
Actuator pos	CAN-L
	CAN-H
	Alarm
	Actuator pot GND
	Actuator pot signal
	Actuator pot +5V
	Pot. 2 GND
	Pot. 2 signal
	Pot. 2 +5VDC



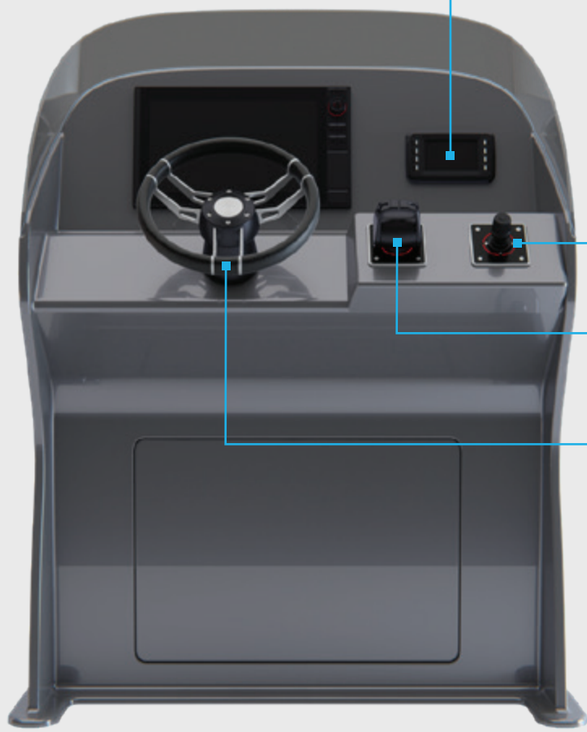
AI SIGMA CONTROL SYSTEM AND INTELLIGENT DYNAMICS

Alamarin-Jet Sigma Control System 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 Control System, Intelligent Dynamics is also available as an add-on feature. 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)**



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 quad installation**
- **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-made cables required**
- **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 diagnostics**
- **Intelligent self-monitoring system. Temperature, Pressure and Fluid**
- **USV Ready – comprehensive low-level (CAN) and high-level (IP) interfaces**

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