

# *aqua watt*

## **Electric Propulsion Inboard Engines**



### **4 to 50 kW**

**EN 3—2016**



**Austrian quality**



# aqua watt

## *Advanced inboard electric propulsion systems with AC motors and digital motor controllers*



aquawatt offers one of the world's most unique high powered electric marine propulsion systems for pleasure and commercial boats to date. Instead of petrol smell or loud noise a high tech AC motor provides clean power with almost no maintenance and full thrust at all rotation speeds.

If you are looking for a real sustainable investment, this is the solution for any motor- or sailing boat. The huge advantage compared to a petrol or diesel engine is the high torque at all speeds and the variability of your power source. Traditional lead acid batteries, advanced lithium batteries, solar panels or even a gas- or diesel generator. Your boat can be adapted to any new technology without the need of changing the main propulsion system.

Did you know? The world's largest new cruise ships are equipped with electric engines!



.These high quality systems are produced individually. An option with two motors for double power is possible as well as other tailor made adaptations for special requirements.

The installation of any inboard motor system should be planned and executed by a boat builder. If this knowledge is not available, we recommend the use of our powerful outboard motors which can easily replace any petrol outboard en-



# **aqua watt** water cooled motors

## **The new AW-I series**

Versions with integrated thrust bearing, made of sea water resistant aluminium

Highest efficiency

Highly variable mounting system

Protected against bilge water

Especially for lithium batteries

For the use in fresh and salt water, also for tropical conditions.

## **Types water cooled**

### **AW-I/132/4S for 48/50 Volt battery systems**

Power range 4-6 kW

Water cooled digital motor controller

Recommended propeller diameter 13 inch

Weight 50 kg

**Price from Euro 6.000.- excluding VAT**

**Euro 7.200.- VAT included**

### **AW-I/132/4M/20 for 100 Volt battery system**

Power range 15-30 kW (30 kW at 2.500 rpm minimum)

Water cooled digital motor controller

Recommended propeller diameter 12 to 13 inch

Weight 60 kg

**Price from Euro 12.200.- excluding VAT**

**Euro 14.640.- VAT included**

### **AW-I/160/ for 144 Volt battery system**

Power range 30- 40 kW (40 kW at 2.500 rpm minimum)

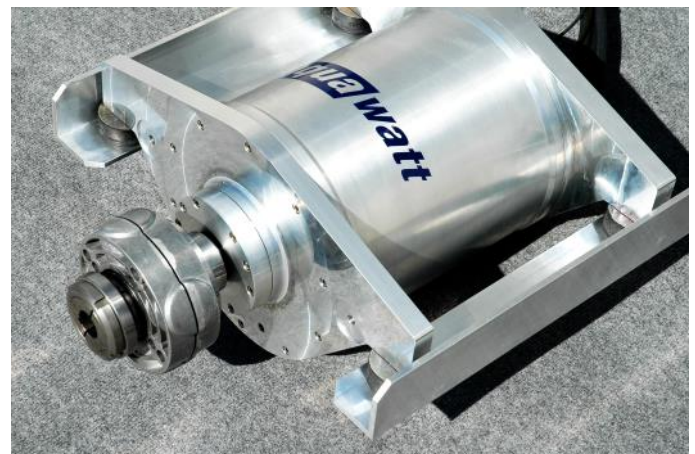
Water cooled digital motor controller

Recommended propeller diameter 13 inch

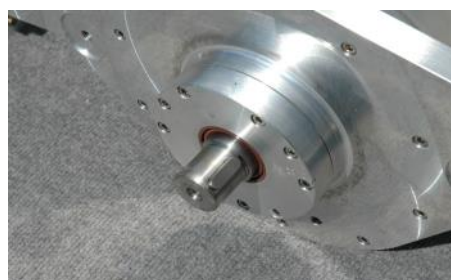
Weight 85 kg

**Price from Euro 14.200.- excluding VAT**

**Euro 17.040.- VAT included**



## **Engine shaft connection with key or SAE flange**



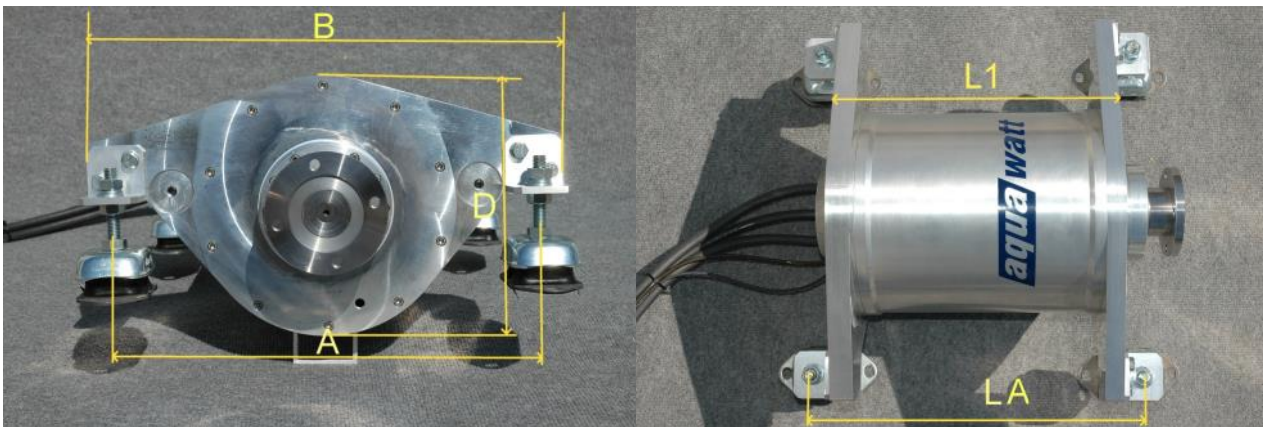
## Variable mounting system

**Version MF** with flexible engine mountings, ideal when combustion engine is replaced by the electric motor

**Version ST** for mounting between 2 stringers. The best for new constructions.

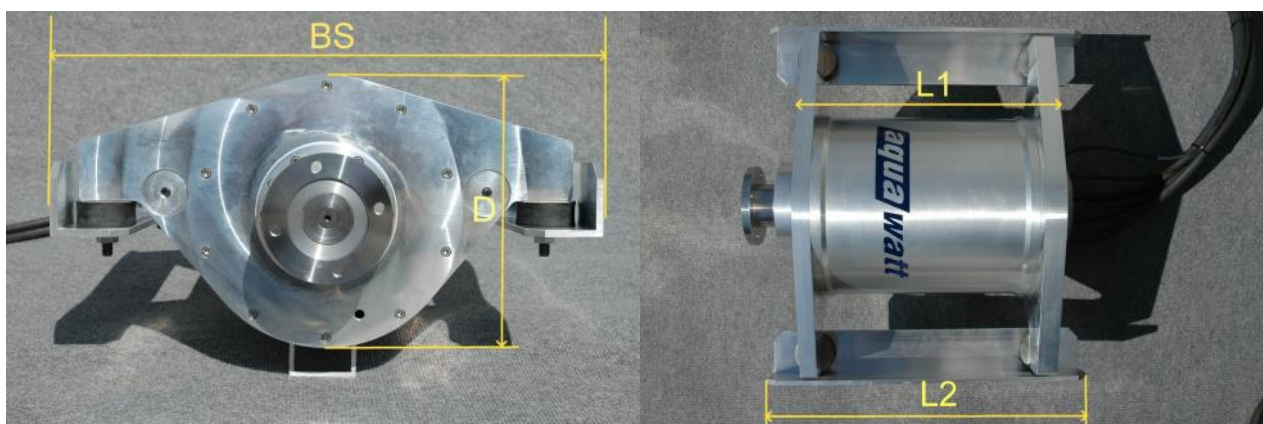
Version MF with flexible mountings			
dimension	4-6 kW	15-30 kW	30-40 kW
A	370mm*	370mm*	370mm*
D	233mm	233mm	273mm
B	420mm	420mm	420mm
LA	276mm*	366mm*	406mm*
L1	220mm	310mm	350mm

\* other dimensions orderable



Version ST, mounting between stringers			
dimension	4-6 kW	15-30 kW	30-40 kW
D	233mm	233mm	273mm
BS	450mm**	450mm**	450mm**
L2	310mm***	400mm***	440mm***
L1	220mm	310mm	350mm

\*\* available up to 500 mm, \*\*\* more length orderable



# **aqua watt** air cooled motors

## **IEC series, air cooled engines in industrial housing**

For the use in moderate climate and preferred with conventional lead batteries.

### **Air cooled versions**

#### **IEC 132 for 96 / 100 Volt battery system**

Power range 10-20 kW

Air cooled motor controller

External electric blower 12V or 24V

**Price from Euro 6.130.– excluding VAT**

**Euro 7.356.– VAT included**

#### **IEC 160 for 48 Volt battery system**

Power range 2 to 10 kW, extremely high efficiency at 2 kW to be used in solar powered boats.

Air cooled motor controller

External electric blower 12V or 24V

**Price from Euro 6.600.– excluding VAT**



**Dimensions IEC 132**



### **Additional information's to**

#### **IEC 132**

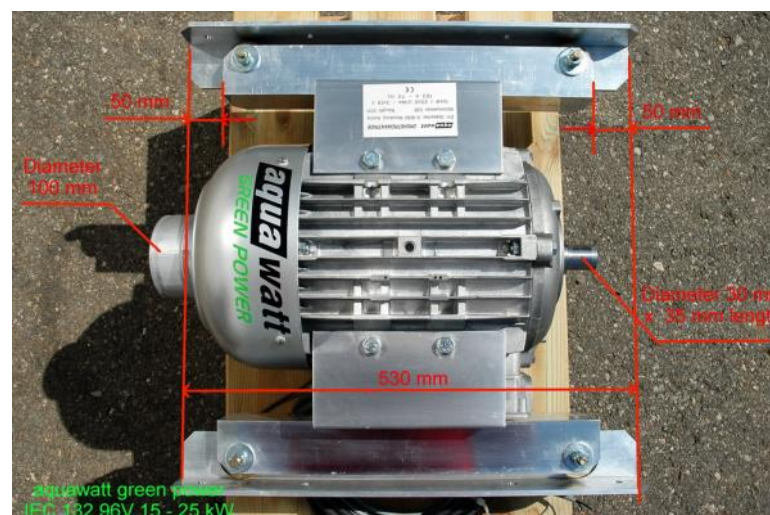
Best 15 kW at 2.000 rpm,

max. 24 kW at 2.500 rpm

for 15 minutes

Weight 50 kg

Propeller diameter 12-13 inch



# **aquawatt** specials :

These advanced engines and the controllers have been specially designed and produced for the aquawatt boat propulsion systems. Each motor is fully enclosed.

The performance curve of the aquawatt engines is almost linear to the rotation speed on a wide range. A petrol or diesel engine rarely runs at its best working speed and needs a variable gear box to adapt at least some of these losses. The AC motor does neither need a speed box nor a dedicated rotation speed to run at the most efficient point of operation.

The full torque is available at all speeds. When more thrust is needed at lower speeds the motor controller sensors this and increases the power output. If more speed is possible at the throttle position chosen, the controller optimizes the power output to get to that speed.



aquawatt electric engines are equipped with a motor data information system. The LCD– display indicates the rpm of the electric motor, the battery voltage, the operation hours, the motor current and the battery current.

Additionally the charging state of the battery is shown in percentage and a graphical display. Low battery and high temperature release an alarm light.

aquawatt delivers standard and special propellers, all propeller shaft assemblies like stern tubes made of bronze or fiberglass, shaft struts , bearings and seals.



**Development, manufacturing and sales**

**aquawatt Mechatronik und Yachtbau**

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