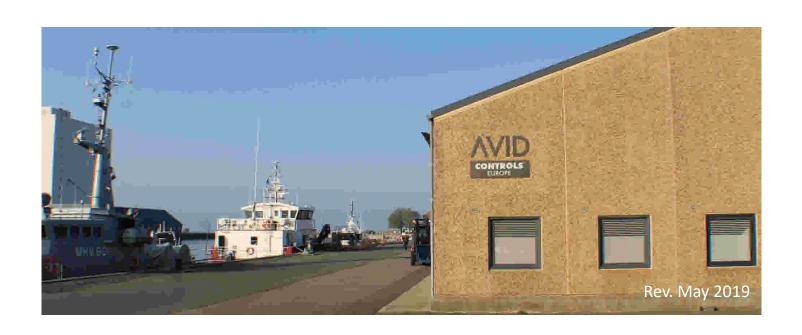


In Europe



Complete Spares & Service for your SWT-2.3, SWT-3.6 & SWT-3.0 turbines using MV3000 Converters



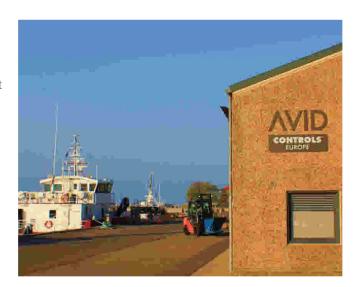
## AVID AT THE HEART OF THE EUROPEAN INSTALLED WIND BASE

In 2019 Avid Controls opened its facility at Rødbyhavn - a harbor town on the south coast of Lolland, Denmark which is at the heart of Europe's wind turbine base. It provides immediate access to a comprehensive inventory of spares for the thousands of installed MV3000 controlled converters in European waters – and on land.

Avid not only offers direct replacement spares but also upgrades to replace mature power modules with state-of-the-art AEI<sup>TM</sup> equipment which in many cases reduces module count and boosts reliability thus extending the life of your turbine.

Avid has being supplying equipment to the vast wind farms in the USA for over 12 years and provides an experienced service

second to none. Even though Avid carries a massive inventory at its Texas factory it has recognized the need to support the European installed base. This means that customers in Denmark, Germany, the UK and Scandinavia can enjoy deliveries in 1 – 2 days - the same as their USA counterparts.



## TRAINING, TEST & REPAIR

Avid's facility in Denmark is also being geared up to provide MV3000 training as well as comprehensive test and repair facilities. A 1500A load rig will be commissioned in 2019 further enhancing Avid's capabilities.



Michael Christensen is Business Development Manager based in Denmark and has worked with MV3000 converters for many years

#### TYPICAL STOCK HOLDING

The Denmark warehouse holds a comprehensive inventory and typically this will include:

MVDL800 Delta Modules for Type 27 Converter MVDL800 Delta Modules for Type 28 Converter MVDL1000 Delta Module for 3.6MW Converter

MVC3003-4030 SMPS MVC3003-4025 SMPS

20x4390 Extended I/O unit

MVC3002 Regular I/O unit

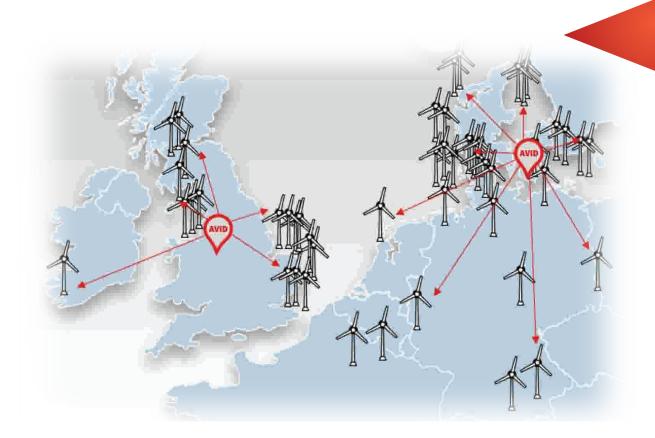
MVC3001 Grid Controller

MVC3001 Network Controller

plus sharing Reactors, Cables and Hoses.







### AVID SERVICES – so much more than spare parts.

In addition to providing direct replacements for your SWT Turbine Converter, Avid can also offer other options to extend the life of your equipment. This means that the user can choose between New Parts, Remanufactured Parts or an AEI® Technology Upgrade Kit

**New Parts** - Avid makes brand new Delta modules in its Texas factory and builds to stock. The Delta modules use the latest SKiiP® 3V3 D+ devices and includes 100% new parts.

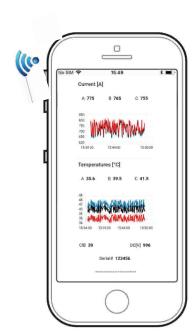
Remanufactured Parts - Avid takes in old Delta modules and completely strips them down, replacing the SKiiP® modules and any other worn parts. All remaining parts are cleaned via ultrasonic or other applicable means depending on the part. Electrical parts are tested and the capacitor bank is fully analyzed and tested for expected lifetime. The Delta is then built up using all new gaskets, "O" rings, plumbing seals, fasteners and power IGBT devices. Full hydraulic pressure testing at 6.9 bar is carried out prior to final load test [110% of FLA for 30 minutes with 50C coolant temperature]. The delta is given 12/18 month warranty.

## AEI® Technology Upgrade Kit

Avid uniquely offers a system upgrade to the latest AEI® Technology which moves the turbine converter to a whole new level of reliability. The Avid Extreme Inverter (AEI) uses advanced SKiiP 4® devices which are sealed via Avid's patent pending procedure and validated as completely moisture and condensation safe for use – unlike the existing technology. Furthermore, the AEI system replaces both the conventional DIB and SMPS boards in favor of the Avid designed CIB (Controller Interface Board) and APU (Auxiliary Power Unit) which greatly enhances reliability in these two key areas. The AEI is the same physical size as the 800/1000A Delta modules and Avid offers a complete upgrade kit comprising:

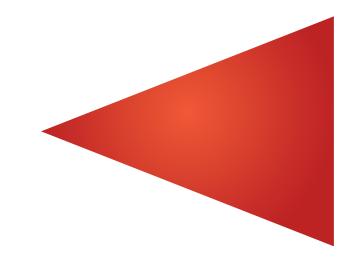
6 each- AEI900L-4X 2100-00-R Inverter Modules 2 each- AEI-APU-C-00 (master aux power unit) 4 each- AEI- APU-D-00 (slave aux power unit) 1 each- 1919N-2 control power transformer 1 lot- ultra safe fuse holder with switches and fuses

For further details on the AEI, please contact us.



# ENHANCED POWER MODULE DIAGNOSTICS

When upgrading to AEI Technology, Avid can offer remote monitoring and diagnostics to provide fault codes, current in each phase from each inverter, voltage, temperatures etc., so that the status of all inverters is known at any given moment. Deviations from normal operation can be seen before system failure. iOS and Android compatible.



#### AVID IN THE UK

Avid's UK base is centered on North Staffordshire at the heart of the UK where inventory is carried to support onshore and offshore wind operations thus reducing waiting times. Avid has UK based specialists who provide design, technical and commercial support and have extensive knowledge of the MV3000 range.





With over 40 years' experience as an electrical and mechanical designer, **Mick Cooper** was involved in the MV3000 product design from the beginning and is now engaged on enhancing the Avid portfolio with new drives products.



Mark Woods has over 38 years' experience in industrial controls and was Product Sales and Support Manager for MV3000 drives. Mark provides technical, commercial and regulatory support to Avid Controls using extensive knowledge built up since the launch of the product in 1998.

#### **AVID IN TEXAS**

Avid's European locations are supplied and supported from its factory in Waller, Texas where it has been working with USA wind farms for more than 13 years and is now the "go to" company for wind converter spares and support.







Email : info@avidcontrolsinc.com Website : avidcontrolsinc.com

**CONTROLS**° Tel: +1 (281) 640-8600