Dormagen, Germany - Coatema, the market leader for continuous lab and pilot plant coating and laminating equipment, has developed a special unit for sintering, impregnating, and coating gas diffusion layers. The same unit can also coat catalyst onto membranes.

Volum production of the MEA is possible because also included in the unit is a unique continuous laminating system to join the various components into the multi-layer MEA. All necessary production steps can be realized in this one machine requiring very limited floorspace.

This unit was delivered to the Forschungszentrum Jülich (FZJ) in Germany. FZJ is one of the leading institutes in the area of DMFC and PEMFC development. The unit will be used to boost the institute’s DMFC program which is supported by the German government.
Recently at the Hannover Fuel Cell Conference the FZJ displayed a functioning 500w DMFC stack. With this unique machinery delivered by Coatema they will quickly be able to improve stack technology because of their ability to work with it's continuous coating and laminating capabilities.

In the drawing it is possible to see all internal components and visualize the various process steps used in producing the components and the finished MEA. The photo shows how compact the unit is – footprint is only approximately 1.5m x 6.0m.

The unit is equipped with interchangeable, modular coating heads that can easily and quickly be switched. There are high performance drying and sintering sections. Control is via a PLC with visualization software. This unit is truly “state of the art” in the science of fuel cell manufacturing.

FZJ and Coatema are willing to show and demonstrate this unit to interested parties. Coatema also has their Center of Coating Competency available for customer use for tests, trials, and development. In this center Coatema has installed their full range of lab and pilot plant coating and laminating equipment. Chemical and process experts are on the staff at the center.

EurotecUSA represents Coatema Maschinenbau in the United States, Canada and South America. Please contact Bob Sandbank at (239) 642-3756 or bob@eurotecusa.com to discuss how EurotecUSA and Coatema can be of assistance.