

EDWARDS VACUUM

# Magnetically levitated turbomolecular vacuum pumps



The new generation of turbomolecular pumps from Edwards Vacuum



With considerable experience and a leading position in vacuum technology, in this article Edwards Vacuum presents us with its innovative new product: a new generation of turbo pumps. These products have been designed to respond to harsh semiconductor environments and applications and meet the requirements of the glass coating and solar markets.

## THE COMPANY

Edwards is a leading supplier of integrated solutions for the manufacture of semiconductors, flat panel displays, LEDs and solar cells. It is also a world leader in vacuum technology for industrial, scientific, process and R&D applications. The company employs around 4,000 people globally in the design, manufacture and support of high technology vacuum and abatement equipment.

Edwards produces more than 8,000 magnetically levitated turbo pumps a year and has sold more than 90,000 pumps globally into the semiconductor, analytical and scientific markets since 1983.

## THE NEW GENERATION OF TURBO PUMPS

Building on years of experience in harsh semiconductor applications such as metal etch, PVD, and CVD, as well as LCD processes, Edwards has moved on to develop a new generation of turbo pumps with various

power supply and control modules that can be mounted directly on the pump. They focus on the requirements of the growing industrial glass coating and solar markets where historically oil diffusion pumps have been used. Costly power and water consumption and process contamination with oil vapour, has driven the need for compact pumps, providing energy efficient, clean vacuum.

The new *STPiXA2205* is the latest to join Edwards iX family of turbo-molecular pumps. It offers a compact solution with integral controller and a detachable power supply. This feature means that on systems with multiple pumps it removes the need for space consuming controller racking and control cables, the pump comes in 1600 l/s and 2200 l/s versions and is available with RS232/485 and Profibus serial communication interfaces. A water proof and dust proof IP54 version is also available for humid environments where cooling water dewpoints can be an issue, as well as a temperature management version designed to prevent the build up of solids in the pump.

The pump's five-axis magnetic bearing system and new motor and drive system ensure long life and low operating costs with maintenance intervals as long as five years. The

pump and controller together are virtually the same height as the previous generation of pumps alone. This can be especially important in retrofit applications where the turbo pump is replacing some other pumping technology.

All turbo pumps are able to be connected to Edwards advanced monitoring system which tracks and logs key parameters, to give advanced notification of when a service is required.

The new Edwards iX family of pumps provides industry leading performance from 300 l/s to 2200 l/s, larger sizes are planned for the future.



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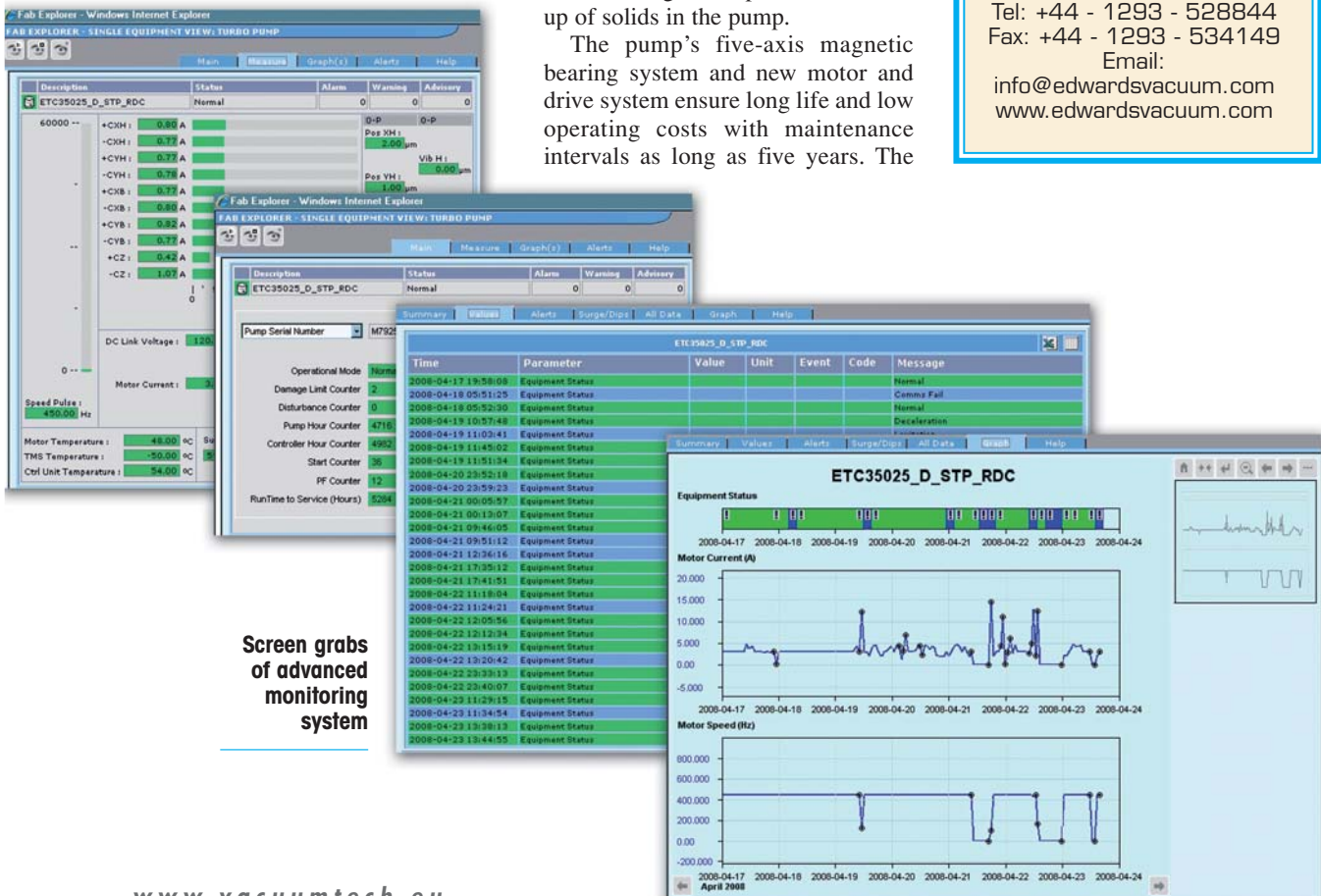
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Screen grabs of advanced monitoring system