



SUCCESS STORY

# TANK UP THE SUN

– efficient, smart and green

Vacuum solutions for coating systems  
to produce ultra-thin modules  
for solar energy.



## INDUSTRY

Solar energy, Switzerland/Hungary



## REQUIREMENT

Special solution for coating systems  
for building-integrated solar energy.  
Efficiency and cost benefits were the  
set targets.



## EBARA SOLUTION

Turbomolecular pumps without costly  
bypass solutions. Cleaning process  
for extremely resistant deposits.



## CUSTOMER

Innovative supplier of ultra-thin  
modules for building-integrated solar  
energy.

*Ahead*  *Beyond*

## Project description

### Initial situation

The customer, a highly innovative company that is successful with its specially developed products for thin-film solar technology.

The order included the implementation of over 125 turbomolecular pumps and booster pumps. The customer was also looking for a solution to minimise the servicing of the turbomolecular pumps with extremely resistant deposits on the rotors.

The challenge was that the implementation of the vacuum pumps had to be smoothly integrated into the construction of a new production building. The time frame had to be adhered to within the overall construction plan. For this purpose, the pre-assembly took place in a temporary location near the construction site.

### The solution

Together with the customer, the EBARA Applications Team worked out a solution custom-tailored to all requirements for the fitting of the 4 CIGS coating systems. Since 2013, EBARA has been providing continuous technical support for the systems. The detailed knowledge about the systems delivered the best solution.

Another point was the support during the development of the system. The result is that costly bypass solutions for pumping out have been eliminated, and the booster pumps have been reduced by 58% thanks to intelligent speed and valve control.



*Premium quality, high level of efficiency, adherence to schedules and cost minimisation  
– with EBARA, you get innovative and reliable solutions*

### EBARA technology used

- Turbomolecular pumps of the EMT2204MK series
- Booster pumps
- Cleaning process for turbomolecular pumps
- Implementation
- Technical support



### The benefits

- Adherence to schedules
- Cost reduction
- Cleaning of extremely contaminated pumps
- Service-friendly solution

EBARA was the only supplier able to offer a cleaning process for the rotors of molecular pumps with extremely resistant deposits. Normally, such pumps must be treated elaborately during servicing. Now the pumps can be overhauled at any time and at very low cost.

Our customer was won over by the technical support and the commitment of EBARA employees who are always striving to implement an optimal and cost-efficient solution.

The innovative power of both sides made this solution feasible.

EBARA is a leading global manufacturer of vacuum and semiconductor systems used in the production of wafers, liquid crystals, solar cells and other products requiring cutting-edge technology.

EBARA supports



EBARA Precision Machinery Europe (EPME) belongs to the EBARA Group of Japan and employs about 230 people in Europe. The portfolio includes dry and turbomolecular vacuum pumps and gas cleaning systems. Furthermore, EPME sells state-of-the-art CMP tools, wafer bevel polishing and substrate coating systems. In Europe, EPME operates a central warehouse and an overhaul centre for vacuum pumps.

**EBARA Precision Machinery Europe GmbH**

Am Promigberg 20, 01108 Dresden, Germany • [info@ebara-pm.eu](mailto:info@ebara-pm.eu)

