

## Press Release

[www.ecoclean-group.net](http://www.ecoclean-group.net)

**Ecoclean implements energy efficiency gains in an automotive production plant – Power and water consumption reduced by about 30% percent**

**At the BWM Group's engine plant in Steyr (Austria), in a reference project accompanied by the Technical University of Vienna, Ecoclean Monschau has significantly raised the energy efficiency of a flexible EcoCflex Classic robot cell that had been in service for several years. The system's electric power and water consumption were each cut by around 30 percent. These energy efficiency measures are now intended to be implemented on another 95 systems of the same type installed at various sites throughout Europe and Asia.**

The BMW Group has been using EcoCflex Classic robot cells made by Ecoclean Monschau for around 12 years in several of their factories to debur and clean engine parts such as, e.g., cylinder heads for diverse car models. At the Steyr (Austria) engine plant, 30 first-generation units of this flexible cleaning machine are in use. Now as before, their cleaning performance is beyond reproach. However, in terms of energy efficiency – a parameter closely monitored by the BMW Group – the systems are no longer up to today's standards. Their water consumption in particular has proved too high. BMW Steyr therefore contacted the equipment manufacturer, inquiring if and how the machines could be energetically optimized.

### **Potential analysis revealed saving options**

Ecoclean has developed a potential analysis especially for this type of task. In their investigation, the equipment maker's service staff will focus on factors such as the water consumption, cleaning agent input, electricity demand of power drawing equipment, and the consumption of compressed air. Flow measurements revealed that large quantities of vapour were extracted from the cleaning cell, causing the machine's elevated water consumption. Furthermore, the analysis identified a major electricity saving potential in operation of the feed pumps.

### **Small measures, large effect: 30 percent savings**

One measure taken to reduce the water consumption involved changes on the air control dampers. Moreover, the flow velocities inside the system were adapted via a modified fan control regime, resulting in substantially less vapour getting discharged. In the case of the booster pump, a variable-frequency drive unit now provides demand-based control and hence, energy savings.

Thanks to these relatively minor improvement measures the system's overall electric power consumption was cut by around 30 percent. Savings of the same magnitude were achieved at the level of the water consumption, and are additionally reflected in a reduced need for cleaning chemicals.

### **An independently validated reference project**

The measures were initially carried out on a system installed in the Steyr/Austria-based engine plant. For an objective evaluation of results, the Technical University of Vienna accompanied the reference project with extensive pre- and post-optimization measurements. Depending on the availability of national or regional programs, the unbiased attestation of this successful efficiency improvement may support applications for public funding.

Contact:

Ecoclean GmbH, Jochen Theissen, Director After Sales Service,  
52156 Monschau, Germany, Phone +49 2472 83- 501,

jochen.theissen@ecoclean-group.net, www.ecoclean-group.net

Photo: Ecoclean\_PR\_Service\_Energieeffizienz\_BMW-Steyr\_2



Energy efficiency measures yielded an approx. 30 percent reduction in the electric power and water consumption of an EcoCFlex Classic robot cell that had been in service for several years.

Photo: Ecoclean\_PR\_Service\_Energieeffizienz\_BMW-Steyer\_1



Due to the integration of a variable-frequency drive unit, the booster pump is now controlled as a function of demand so that the unit uses much less energy.

*The SBS Ecoclean Group develops, produces and markets forward-looking machinery, systems and services for industrial part cleaning and surface treatment applications. These solutions, which are among the best in the world, help companies around the globe to manufacture their products efficiently and sustainably in high quality. Customers come from the*

*automotive and supplier industry, as well as the broad industrial market - from medical, micro and precision engineering through mechanical engineering and the optical industry to power engineering and the aviation industry. Ecoclean's success is based on innovation, cutting-edge technology, sustainability, customer proximity, diversity and respect. The Group has twelve locations in nine countries throughout the world and employs more than 900 people.*

Thank you very much in advance for sending us a voucher copy or publication link.

**Editorial contact**

SCHULZ. PRESSE. TEXT., Doris Schulz, Journalist (DJV)  
Landhausstrasse 12, 70825 Korntal, Germany, phone +49 711 85408,  
[ds@pressetextschulz.de](mailto:ds@pressetextschulz.de), [www.schulzpresstext.de](http://www.schulzpresstext.de)

Ecoclean GmbH, Kathrin Gross, Marketing  
Phone: +49 711 7006-223, Fax +49 711 7006-148  
[kathrin.gross@ecoclean-group.net](mailto:kathrin.gross@ecoclean-group.net), [www.ecoclean-group.net](http://www.ecoclean-group.net)