IN FOCUS

Conscious decisions thanks to environmental product declarations

Customers want to buy sustainable products. To be able to assess which product has the lowest environmental impact, it is necessary to have comparable data on the complete product life cycle. By introducing standardized environmental product declarations (EPD), Sulzer has started supplying its customers with transparent and comparable environmental data. The EPDs from Sulzer help customers in their investment decisions and in the sustainable design of their value-added chain.

EPDs are based on life cycle assessments (LCA)

Life cycle assessments analyze the environmental impact of products during their complete lifetime. The ISO standard 14 040 describes the basic elements of a life cycle assessment. However, reviews can differ since different methods of analysis and different standards may be used. That makes the interpretation of the LCAs and a comparison of the products difficult.

Product category rules (PCR) make it possible to compare EPDs

A comparability of life cycle assessments can be achieved by applying ISO standard 14 025 type III and by using product category rules. PCRs are based on globally recognized product classifications (CPC = central product classification) and define the standards and the necessary assumptions for certain product categories. PCRs are drawn up and adopted based on the initiative of companies within the context of a stakeholder dialog. Sulzer has already been involved in the creation of a PCR for pumps.

“With the EPDs, our customers gain a comprehensive picture of the products and can take the environmental impacts into account in their investment considerations. Many of our customers are the focus of great public interest and would like to arrange their complete value-added chain in a sustainable manner. This desire is particularly strong in energy-intensive markets such as oil and gas. An intensive discussion regarding sustainability is also taking place in the power generation market. Our customers can search for the best possible sustainability solutions with the help of EPDs. In this way, Sulzer makes a contribution to transparency and the promotion of new, environmentally conscious life cycle thinking.”

Sulzer has already drawn up EPDs for 20 products. The first product categories to be covered were pumps. In the meantime, EPDs also exist for separation technology and surface-coating products. As the next step, Sulzer has also contemplated the environmental declaration of services.
**EPDs describe verified environmental impacts**

In an environmental product declaration, data from life cycle assessments are prepared, and statements about environmental impacts are made. These data can be compared with other EPDs of the same product category. There are several EPD initiatives. Sulzer has decided in favor of the Swedish “International EPD System,” because this standard prescribes external verification of the information in the EPD by third parties (in accordance with the ISO 14025 type III standard). More information on this EPD system can be found at www.environdec.com

**EPDs provide information on resource consumption and emissions**

The consumption of resources (materials, water, energy) is accounted for in the EPDs, and the environmental impacts (emissions) are assessed. These include:

- **CO₂ emissions**
- Acidification of water and the soil
- Photochemical smog through the formation of ground-level ozone
- Depletion of the ozone layer
- Water pollution through the demand for biochemical oxygen

A number of EPDs from Sulzer go beyond the mandatory minimum standard. They not only contain the environmental data, but also information on the product costs that arise. This information is very important for the customers because the greatest costs and most of the emissions for “active” products, such as pumps, take place in the operating phase.

The product costs are presented in clear diagrams in the EPDs from Sulzer:

- Proportion of procurement and manufacturing costs
- Proportion of operating costs: power consumption (more than 90% for pumps)
- Proportion of operating costs: service

**Customers profit from EPDs in many ways**

- Thanks to EPDs, customers know the environmental impacts of products over their complete lifetime.
- Customers can compare the data of different products for investment decisions.
- Customers have the assurance that the statements regarding environmental impacts are based on verified data and comply with the ISO 14025 type III standard.
- Customers can use the information from the EPDs in order to save costs—for example, through investment in particularly energy-efficient products.
- Based on the data provided by the EPDs, customers can improve the sustainability of their value-added chain.
- Customers can demonstrate the environmental awareness of their actions and can use this for image building and as a sales argument.

**Customers praise Sulzer’s pioneering role—one example**

The Abengoa SA company (Seville, Spain) is active in the areas of energy and environmental technology and makes use of Sulzer pumps for solar-thermal plants. Abengoa has positioned itself as a sustainable company and demands that all suppliers map the complete life of their products. With the EPDs from Sulzer, Abengoa can be sure it is selecting the most energy-efficient pumps. Abengoa praises Sulzer’s efforts in making the sustainability of the entire product life cycle transparent and in improving this sustainability. As an acknowledgment of Sulzer’s pioneering role in energy and resource efficiency, Abengoa awarded Sulzer the “Sustainable Business Award” in 2011.