

## VBG Ltd and VBG Produkter: Case Story

*“The consistent implementation of modular platforms is one of our major strategic concepts for the future. The competence and know-how that Modular Management AB offers has been a great support for us when implementing changes of vital importance in the areas of R&D and manufacturing processes.”*

Anders Birgersson  
President & CEO, VBG AB

### Company

The VBG Group develops, manufactures and markets trailer couplings with coupling equipment, anti-skid devices and dropside pillars for heavy vehicles, shaft-hub connections and frictions springs for the machine industry. VBG is also the distributor of VBG fifth wheel products on the Scandinavian aftermarket (Fig.1).

The Group's turnover for 2001 amounted to MSEK 552 and the average number of people employed was 333.

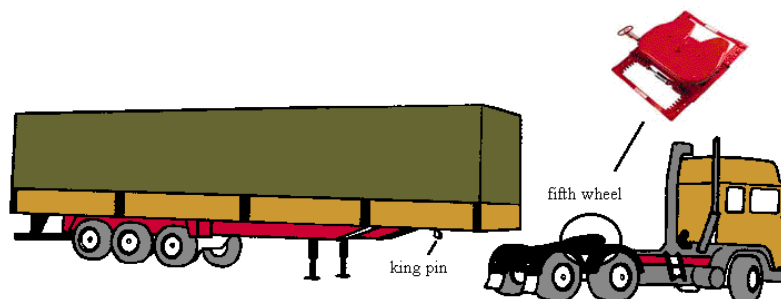


Figure 1. The VBG fifth wheel, a coupling device between a tractor and semi-trailer.

### Challenge

VBG's order flow varied significantly. The production of drawbar couplings was customer controlled and variations in the number of incoming orders were managed by re-allocating resources and maintaining high volumes of inventory to cover order peaks, and by

working overtime and employing temporary personnel. Another problem was that the production system had become obsolete. In addition, VBG had trouble keeping up with their competitors in offering the product features demanded by customers.

Both the fifth wheel and the drawbar coupling had too many unique parts, which led to high purchase costs and long lead and set-up times in manufacturing and assembly.

In addressing these issues, VBG wanted to reduce the complexity of the product structure and the production system, while at the same time maintaining a large product range with fewer unique parts per variant.

How Modular Management helped

#### *Drawbar coupling*

The first step towards creating a successful modular architecture was initiating a co-operation between VBG Produkter, Chalmers University of Technology in Gothenburg and Modular Management AB, using an earlier version of *Modular Management's unique methodology*. This method was used to design a new range of drawbar couplings. VBG also decided to reorganize their production system to accommodate the new modular concept and thereby enjoy the maximum benefits of modularisation.

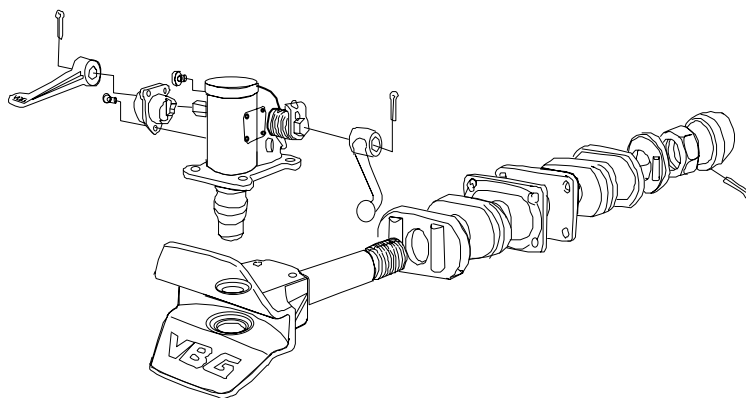


Figure 2. The modularised VBG drawbar coupling.

### *Fifth wheel*

Thanks to the success of the modular production system for the drawbar coupling range, VBG enlisted Modular Management's help in starting up a complete, new workshop adapted to the modular structure of the fifth wheel. The project was run according to the drawbar coupling project and was divided into two parts: defining a modular architecture for the existing design and planning the layout of the new workshop.



### Results

The project succeeded in lowering total costs and reducing the number of unique parts and article numbers. VBG also managed to ensure that the new modules would fit as spare parts for the older design.

The modularisation project was one of several projects that contributed to a rise in net profits *from 8% to 20% of turnover* over a two-year period (1993-95). The considerable reduction in lead-times made it possible to deliver to customers in Scandinavia *within 24 hours*. Other results included the following:

- With the new modular design, the number of unique parts contained in the fifth wheel was reduced by 42%.
- Assembly time was cut by 56%.
- The number of raw parts (forging and casting) contained in the drawbar coupling was reduced by 48%.
- The new modular drawbar coupling workshop decreased production lead-times dramatically from 21 days to only 3 days.

In 1997, VBG AB acquired RINGFEDER, a German manufacturer of trailer couplings and machine elements. Thanks to the modular way of thinking within the VBG Group, the acquisition of RINGFEDER went very smoothly and VBG experienced no serious problems in integrating RINGFEDER's products.

## **About Modular Management AB**

Modular Management is a Swedish-based company that helps companies define, create and implement modular platforms.

Modular Management has developed its own complete methodology to define modular product structures, called *Modular Function Deployment*, or MFD™. MFD™ is supported by software for creating and maintaining modularised product platforms and financial tools for calculating complexity costs and estimating modularisation potential.

The company was formed in 1995 and today works with some of the largest companies in Sweden, in industries ranging from manufacturing to services. For more information, please contact us at the address below or visit us at [www.modular.se](http://www.modular.se).



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