

Communications

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## **VALMET AUTOMOTIVE, SPECIALITY CARS MANUFACTURER**

Valmet Automotive is a car producer owned by Valmet Corporation. The company has specialised on design and production of demanding speciality vehicles. Its core business are high-quality speciality cars and convertibles. Valmet Automotive offers its experience and production capacity to other car producers.

Valmet Automotive's plant consists of a body shop, paint shop, final assembly and a product development centre. The personnel counts 1400 employees. Last year, the company's total output was 30,000 cars. The turnover amounted to about 100 mio USD (value added, material excluded).

Today, the company produces Porsche Boxster convertibles to Dr. Ing. h.c. Porsche AG and Saab 900 Convertibles to Saab Automobile AB.

The Porsche Boxster production started at Valmet Automotive September 3, 1997. The Agreement made by Porsche AG and Valmet Automotive covers an annual production of at least 5,000 cars in Uusikaupunki.

Since the production start 1986, Valmet Automotive has been the single source of the Saab 900 Convertibles and has by now produced 100,000 Saab convertibles.

The company was founded in 1969, and has ever since produced about 750,000 cars of which more than 630,000 units are Saab cars. In years 1991 - 1997, the company produced about 90,000 Opel Calibra cars.

A systematic development of its products and quality improvement have from the very beginning been one of Valmet Automotive's focuses. In the beginning of 1995, the company obtained the ISO9001 Certificate covering the car manufacturing and the product development. All processes are based on the Lean Manufacturing Principle which means that all unnecessary work is eliminated in every work phase and that the personnel is responsible for continuous improvements.

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## **PORSCHE BOXSTER PRODUCTION START-UP IN UUSIKAUPUNKI**

The series production of the Porsche Boxster sports cars started at Valmet Automotive in Uusikaupunki September 3, 1997. According to the Assembly Agreement, at least 5,000 Porsche Boxsters will be produced annually to the world-wide markets.

Valmet Automotive has built a modern and automated body line for the Porsche Boxster production. The Boxster body requires the most demanding welding techniques and high measurement precision. According to the Valmet Automotive practice, every body will be measured on the production line at the laser measuring station to secure measurement precision and even quality. The cars will be painted in the factory's recently renewed paint shop with water based paints. Further, the flexible multi-product line in the assembly shop has undergone remarkable production arrangements to adopt the Porsche Boxster production. Valmet Automotive has invested over 100 Mill. FIM in the Porsche production.

The production of Porsche Boxster cars offers job to more than 300 people at Valmet Automotive. Most of them have already a long experience in the car manufacturing. The personnel has received special training for the Porsche Boxster manufacturing for several months. About 160 Valmet people have studied the engineering, work methods and quality assurance at Porsche AG in Stuttgart.

Preparations for the production started in January this year as Dr. Ing. h.c. F. Porsche AG and Valmet Automotive published their co-operation. The main targets of the project were an earliest possible start-up of production and reaching of high quality targets from the very first car. The pre-series production started on an experimental line as early as in April. The cars made during the training and experimental phase have well met the quality demands set on them. Also the series production started exactly according to schedule.



## THE VALMET AUTOMOTIVE PRODUCTION PROCESS

Geared to swift reaction

**Flexibility and quality are built in the total production system of Valmet Automotive. Designed to accommodate in a flexible manner production of all types of cars from volume products to niche products, the system is geared to swift reaction to short-term market changes. Valmet Automotive has considerable experience of manufacturing several models simultaneously.**

The capacity of the present production system and supplier infrastructure can be increased with minor investment up to approximately 100,000 cars per year. The system can match the individual needs of the customer through the right combination of running hours and investments in the production system.

### Teamwork

"Our flexibility relies on people and on technology, with emphasis on people," says *Juhani Suvinen*, Executive Vice President, Manufacturing. "We have developed the team work concept for more than twenty years. In training we focus on customer needs, quality, commitment and precision, the cornerstones of our competitiveness. Job rotation within the team equips every team member for handling several jobs."

### Advanced production system

The production process is in each case adjusted to meet the requirements of the customer and the product.

The welding shop is flexible and robotized, with 70-90 per cent of spot welding automated.

The paint shop line is designed with a special emphasis on high corrosion resistance, quality finish, and a wide range of colours. The painting process is almost fully automated. The environmentally friendly process meets EU requirements.

The final assembly line is based on the balanced sequence method, with subassemblies and suppliers synchronised in accordance with the just-in-time principle.

The separate lines installed for special and niche products are either separated or partly integrated with the main line, always according to the needs of the contract party and the product.

## **THE VALMET AUTOMOTIVE WAY OF QUALITY**

Right the first time

**The Valmet Automotive approach to quality is based on the comprehensive concept of process quality. In operating practice this means that quality control and quality assurance are integrated in the operating systems.**

The Valmet Automotive quality system has been certified according to the ISO 9001 standard. The certificate covers the design, engineering and manufacturing of passenger cars.

The main quality objective of Valmet Automotive is total customer satisfaction. Immediate response to customer needs is the essential part of service. Customer satisfaction is an essential issue in product quality, delivery precisions, costs and flexibility of production. These are the four areas of continuous improvement, quality is a never ending process.

Control of the production system constitutes the basis of product quality together with control of critical machinery and equipment parameters. Quality assurance of finished products is handled by a final audit team acting on behalf of the contract partners and their end-users.

### **Teams compete in quality**

The development, logistics and production teams take responsibility for the quality of their work in the spirit of the company motto of making everything right first time. The basic training of the personnel is exceptionally high, enabling the teams to take full responsibility for their work.

The teams regularly undergo training in quality, teamwork and problem solving. Each member of the team is responsible for the improvement of working methods and product quality. The performance-related element in wages is linked to attainment of quality targets.

In addition to the ISO 9001 certification, the Valmet Automotive quality system has been audited and approved by such demanding car manufacturers Saab Automobile AB and Porsche AG. Valmet Automotive's production teams respond to all feedback received via the partners from the car users.

### **Suppliers are part of the quality system**

In accordance with the ISO rules, the company controls and monitors the quality of component suppliers. This includes the auditing of all suppliers in accordance with the contract partner's quality standards. Most of them already have a third party ISO 9000 certification and will have a QS 9000 certification by 1998.



## THE VALMET AUTOMOTIVE PRODUCT DEVELOPMENT CONCEPT

Turning an idea into a product

**Valmet Automotive has the experience, skills and tools to manage, in cooperation with the customer, all the stages involved in turning an idea into a product and putting the product into production.**

The focus in design and development experience and capabilities of Valmet Automotive is on body modifications, interior modifications, and concepts for specialty cars. The specialty cars experience includes a significant role in the design and engineering of the acclaimed Saab 900 Cabriolet.

"As a result of our close cooperation with the customer, our product development team has generated special know-how in convertible design and technology," says *Hannu Berger*, Vice President, Product Development.

A new concept car, which was unveiled at the Geneva Motor Show in March 1997, is equipped with a new type of hard folding top stack. The car named *Boreal* features a large number of interesting design and construction solutions.

### Special cars to supplement standard range

Valmet Automotive has the skills and resources to develop, engineer, and put into production all types of special models enlarging the product programme of the customer.

The process covers all areas from design and product planning to market analysis, engineering, prototype testing and production, in close cooperation with the customer.

Valmet Automotive employs experienced people using powerful design and engineering tools that are compatible with those employed by major manufacturers, such as Catia and Alias software.

"As our systems communicate with those of the major car manufacturers, we can design special models simultaneously with our customer. The proven short lead time from start-up into production enables the customer to launch the specialty models simultaneously," Mr Berger notes.