# MecSoft Corporation

18019, Sky Park Circle, Suite K,L
Irvine, CA 92614, USA

PHONE: (949) 654-8163
E-MAIL: SALES@MECSOFT.COM
WEBSITE: WWW.MECSOFT.COM

## Club Bongo rocks with VisualMill

### This Ain't His Father's Machine Shop
Tradition is a good thing. Tradition is what has kept a machine shop called Rosengrens ( http://www.rosengrensmetall.se ) family-owned for four generations (see figure 1). However, sometimes tradition has to take a back seat. That what occurred last year when current owner Sören Rösengren (see figure 2) decided to take the Limhamn, Sweden-based ccompany that his great-grandfather founded in 1909, into the 21st century.
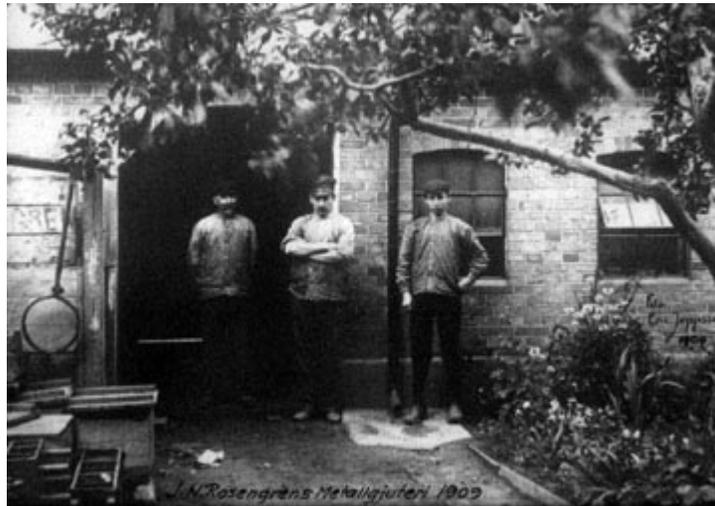


**Figure 1** – Rösengren's workshop in the early 1900s

### Making the Change
The change started late last year when Rösengren realized that the two industrial designers and one prototyping company he frequently works with had successfully implemented 3D design and manufacturing into their daily work. He knew about engraving programs, but understood that they couldn't also meet his 3D milling needs. After asking them a few questions, Rösengren began to understand the importance of supplying his customers with more accurate prototypes. He also found out that the 3D software product that each associate used for designing was called Rhino and they all had the same program for manufacturing – a software product called VisualMill from a California-based company called MecSoft.
So in October of 2003, Rösengren decided to purchase the Rhino/VisualMill bundle and a few months later, the company's first CNC machine was purchased. Without any special training, it didn't take him long to get up and running with VisualMill (see figure 2). When he did need assistance, Rösengren said that MecSoft's technical support was quite helpful.

**Figure 2** - Sören Rösengren in front of one of his machines at his shop today

**V-Carving**

Recently he produced his 2D component that was designed and manufactured digitally, the sign shown in figures 3 and 4. VisualMill's support of standard Microsoft Windows features and advanced V-carving functions made it easy for him to create the lettering used on the plate. What's impressive is that it was manufactured only one week after the CNC machine installed. Some of the patterns are CNC milled to a certain level and then finished by hand. "The combination of hand crafted patterns combined with CNC technology opens new possibilities," noted Rösengren.



**Figure 3** – The first pattern Rösengren created was this bongo sign, made to honor the rock stars who visited the Club Bongo in Malmö, Sweden, in the 60's. This sign is 105 cm x 70 cm x 1 cm and there are nearly 1000 letters. The sign was bigger than the machine's milling area, and had to be divided into three pieces and then put together.

**Figure 4** – Detail of the sign. In addition to V-carving employed here, Rösengren also uses 3-axis operations such as plateau milling.

**Moving Ahead**

Soon afterward, he used VisualMill to machine his first 3D component – a prototype part for a TFT screen, which was designed in Rhino. "The combination of Rhino and VisualMill works great, as there have been no interoperability problems," says Rösengren. "In addition, cores and cavities for aluminum cast prototypes with tight tolerances like those used in the mechanical industry are programmed directly in VisualMill from the customer's 3D files. The finished parts are also made here, and the overall effect has been a dramatic lowering of the cost involved," he summarized. Rösengren sees the use of V-carving for 2D plates as a way to get back the investment made in the software while his new 3D capabilities provide a way to expand his customer base, and therefore allow him to acquire work that wasn't possible before he made the move to VisualMill. "Overall, I see us getting a return on our investment within a year, which is very good. In short, I'm glad I made the move to VisualMill," Rösengren concluded.