

# Viking Cooks Up Repeat Business for AP&T

**The premium appliance manufacturer is once again expanding its production capabilities - and once again relying on AP&T to provide them with precise, repeatable stamping capabilities.**

The Viking Range Corporation has one of the most impressive reputations for style and quality in the appliance business. The Greenwood, MS company was one of the first to bring commercial kitchen performance and design into home kitchens - and in the process, they popularized the high-level stainless steel finish that defines current kitchen style.

This is a company with some of the highest standards for metal forming precision and aesthetics in any industry. So it's no surprise that they have equally high standards when it comes to specifying metal forming equipment. According to Billy Peacock, Viking's Plant Manager - Dishwasher, Viking has always faced a wide range (no pun intended) of metal forming challenges. While Viking production has greatly increased over the years, it still produces a relatively small number of stamped parts compared to other appliance manufacturers. The stampings they produce often require complex draws and piercing, as well as sharp corners and creases and an absolute requirement



for final products with flawless exterior finishes. Also, an unusually large proportion of Viking's stamped parts are stainless steel, including their signature exterior panels. On some Viking products, half of the formed parts are a stainless alloy. Stainless is a notoriously difficult material to form, and as a result, Viking had experienced an unacceptably high scrap rate due to flaws or offal formation.

Since their first kitchen range in 1987, Viking's product line has expanded into virtually every kind of kitchen appliance from toasters to refrigerators and ventilation systems. As a result, their approach to metal

forming has constantly evolved over the years. They've gone from outsourcing their stamping, to using press brakes, to investing in hydraulic presses of increasing capacity and sophistication – all in an effort to gain greater control over the design, quality, and availability of their stamped parts. Over the years, Viking has purchased hydraulic presses from different manufacturers. However, the latest two hydraulic presses have been purchased from Monroe, NC-based AP&T. As Peacock explains, "We needed the best combination of capabilities, precision and dependability."

### ***A plant tour leads to the first purchase***

As Viking's reputation grew in the 90's, the company occasionally relied on subcontractors to turn out the products that couldn't be handled in-house. One of these was Viking's dishwasher line, which was being produced by Asko Cylinda, a Swedish company with a long history of producing premium appliances and known for their state-of-the-art metal forming capabilities.

Impressed with the quality of the dishwashers coming from Asko, Viking management decided to take a trip to Vara, Sweden to tour the plant and evaluate its production



capabilities. They saw many things that impressed them, but one of the most impressive were the AP&T hydraulic presses in operation there. In 1997, Asko had updated its hydraulic press line to a fully automated AP&T system. The resulting installation is highly sophisticated and easily handles complex production matrixes that use a total of 776 different press tools. (At Vara it's not unusual to run nineteen different tool sets over a three-day period.). After returning from their Sweden trip, Viking's management selected an AP&T ZM 5,000 kN hydraulic press for one of their Greenwood plants. Since the new press would have to be used for both blanking and drawing a range of parts, the machine had to be designed for flexibility. This meant including features like a wide coil window, a secondary hydraulic system, and a twolevel press control system. The ZM 5,000 kN press was installed by AP&T personnel in September, 2001.

Many of the characteristics that make stainless so difficult to work with – hardness, susceptibility to tearing and cracking, spring-back and easily marred surfaces – are further amplified by the complex forming and high aesthetic standards required of Viking stampings. Yet according to Peacock, “The AP&T press has consistently produced the most challenging stainless parts with low scrap rates.” In addition, the new press addressed another chronic problem endemic to stainless steel stamping: short die life.



Before the ZM-5000, some dies were lasting as few as a hundred cycles before they needed sharpening. By contrast, the same dies are now going for years without sharpening; one die has been in use for three years and has yet to require service.

#### ***Taking production to the next level***

As demand for the Viking dishwasher line grew, it became obvious the product would need its own dedicated production facility. So in 2005, construction planning for the new facility began, as did the search for a new press to handle the stamping duties.

Although experience with the existing AP&T press had been very encouraging, management wanted to be certain they had found the best press for the application. As a result, the search initially included both mechanical and hydraulic presses. There were three major selection criteria: reliability/precision, cost, and machine height. One of the competitors fell out early in the running, because its machine was simply too tall to fit into the new facility. In the end, Peacock and the others on the selection team decided to purchase a second AP&T hydraulic press.

The new AP&T press actually has fewer

features than the one Viking purchased in 2001. Since this new unit will be producing a narrower range of parts exclusively for the dishwasher line, it doesn't require the operational flexibility the current press needs. Accordingly, the machine was specified with a narrower coil window, a single hydraulic unit, and a single level of control. However, several features were considered absolutely essential for the new machine. For instance, motorized damping spindles to cushion impacts, minimize die wear, reduce operating

noise, and "keep the building from shaking," in Peacock's words. This second AP&T press is also equipped with an automatic hydraulic tool clamping system, as well as a tool monitoring interface system that links mounted dies directly to the press control system.

The new AP&T ZM-5000 press is at the heart of Viking's dishwasher production facility in the new plant in Greenwood, MS. Thanks to the best combination of capabilities, precision and dependability, Viking has expanded its production capabilities and

consolidated its position as one of the leading manufacturers of high-quality household appliances.