



**PRESS RELEASE**  
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## **American Kuhne Offers Advanced Extruder Systems Designed for the Medical Market**

*(American Kuhne, Inc., Ashaway, RI, November, 2009)*... With a strong presence in the medical market, American Kuhne has recently added to their impressive advanced technology extruder offering with a new silicone extruder design. For over 10 years American Kuhne continues to be a strong leader in the medical extruder machinery marketplace – paying close attention to providing a highly engineered and innovative system backed by a superior level of service and support. The ULTRA R/S Extruder for Silicone is a result of that attention, featuring multiple innovations that provide dramatic improvements in process performance, serviceability, and longevity.

### **New Extruder offers Unique Easy-Access Feed Roll Design**

After years of development, American Kuhne's experienced engineering team has designed the most advanced silicone extruder available on the market today. The new ULTRA R/S extruder design offers a proprietary hinged roller feed assembly that is easily opened by loosening two simple swing bolts, providing

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total access for common service and maintenance. The scraper blade is also easily accessed for adjustments or removal. The casting is nickel-plated and the hinged arm and hardened feed liner are stainless steel for abrasion and corrosion resistance. A standard drive belt provides reliable power transmission to the feed roll.



There is an integral water-cooling jacket in the feed section casting and the chrome plated hardened feed

roll is also internally cooled. A second hinge opens to provide easy removal of the feed roll and bearings for service. Feed roll bearings feature special seals to minimize silicone contamination and are easily accessed for thorough cleaning. Spare feed rolls and bearings can be provided for quick rotation during material/color changes. This, in turn, enables unprecedented fast changeovers between runs. The extra wide feed opening enhances flexibility for processing.

The barrel cooling system features cast aluminum bolt-on water jackets with cast-in double pass cooling tubes for maximum heat transfer. Internally cooled hardened and polished screws further enhance processing consistency, minimize gauge variation, and maximize product quality.

The feed roll is powered by a reliable, magnetic particle clutch driven off the



high-speed shaft of the drive motor. This configuration provides accurate and repeatable torque control for consistent process feeding.

### **American Kuhne's Advanced Technology Extruders**

The company offers a comprehensive selection of innovative extruders such as the Ultra MD Series of extruders designed exclusively for a variety of medical applications. These extruders are typically painted medical white with stainless steel guarding, closed loop AC vector drives and optional pressure feedback control. There is also a replaceable feed section liner, which provides the flexibility to configure the feed geometry to best suit the application.

Each American Kuhne extruder includes a Steward Barrier Screw that is designed specifically for the application. The Steward Barrier Screws are the heart of the process and provide a number of critical benefits. The screws are designed to maximize pressure stability for the tightest possible dimensional tolerances, ideally +/- 1.0% or better and minimize melt temperature variation, ideally +/- 1 degree or less. The screws provide the optimum melt temperature for the best possible product performance and surface finish. All design parameters and performance data is generated in AK's Extrusion Lab and in the field, not the result of hypothetical modeling

American Kuhne also offers the AKcel (American Kuhne Custom Extruder Line) modular extruders that allow for quick barrel and screw changes – allowing for fast product changes from small to larger tubing applications. The system also offers customers the ability to quickly perform bare metal clean out of the feed and barrel sections. The systems are available in various families of sizes: Small .5 -1.0", Medium 1.25 – 2.0" and Large 2.25 – and larger.



### **Comments from Customers in the Field**

Tepha, Inc., based in Lexington, MA is a medical device firm pursuing the development and commercialization of innovative products based on the Company's proprietary biomaterial technology. The technology provides a new class of absorbable biomaterials, known as polyhydroxyalkanoates (a.k.a. PHAs), which may be tailored to meet unmet needs for medical devices in multiple fields. Tepha's novel, biosynthetically produced materials offer superior performance in flexibility, elasticity, and biocompatibility; and, for its fiber-based products, excellent tensile strength and strength retention. Tepha recently installed their third American Kuhne line. Their three lines run monofilament, tubing and multifilament products. "Due to the nature of our product we needed the highest quality extruder," said Dennis Connelly, Senior Process Engineer at Tepha. "American Kuhne is one of our valued suppliers, with their breadth of industry and processing knowledge and outstanding service and support."

Another medical customer for American Kuhne is Vesta, Inc with headquarters in Franklin, WI. For more than 35 years, Vesta has been serving medical device manufacturers with innovative solutions in medical grade silicone molding and extrusion. What started out as a small company has grown into a multi-million-dollar global business. Every one of their comprehensive medical device manufacturing, medical device assembly and support services has quality at its core. "We are currently running small bore, tight tolerance silicone tubing both single and multi lumen with our American Kuhne extruders. Their unique feed section feature was impressive but what really stood out to us was the innovative engineering and durable construction," said Bill Woinowski, R&D Manager. "American Kuhne is a great company to deal with: their prices are fair, the



service prompt and they are responsive and honest. Our next extruders will be American Kuhne extruders.”

Eldon James of Loveland, CO manufactures tubing and hose fittings that are distributed worldwide. EJ's BioMed division focuses on production of critical use components for medical devices, bioscience, pharmaceutical and other technology driven applications that require cleanroom manufacture. They run a number of medical products with their coextrusion line from American Kuhne that includes the AKcess control system. AKcess is a Windows based integrated line control system with recipe storage, trending and report generation capabilities. “We love the ease of use, graphics and touch screen display of the AKcess,” said Bill Coulson, Owner. “The American Kuhne extruder is an all around great machine and we are extremely happy with it. AK offers superior quality and service – unmatched in the industry.”

### **Record Setting Performance**

More than half of all American Kuhne's medical business is in supplying complete turnkey tubing systems. American Kuhne systems offer specific benefits for a variety of these applications within the medical market. For high volume applications such as IV Tubing processed from PVC, non-PVC, or non-DEHP formulations, the most important factor besides dimensional tolerance and tube clarity is usually production speeds. American Kuhne recently shipped a non-DEHP line capable of 800 ft/minute line speed. Last year two systems were shipped with production output rates of 625 lb/hr. This record breaking performance was achieved “out of the box” shortly after start-up.

Another type of application includes microbore tubing that is typically used for minimally invasive medical procedures where quality is more important than



output. Extremely tight tolerances are critical in these types of applications and many of the tube configurations are multi-lumen or multi-layer structures.

“Paying close attention to each detail in the system design for a specific product; and having the insight and ability to integrate each component on the line insures the best possible performance,” says Steve Maxson, Sales Manager.

“American Kuhne works closely with their customers and downstream equipment suppliers to understand the products and performance criteria necessary to meet the demanding needs of the medical market.” Many times the scope of supply goes beyond the actual equipment and includes additional services such as assisting customers with their validation procedures

### **Global Presence**

American Kuhne extruders are running medical applications all over the globe. The company holds a strong market share in Ireland and mainland Europe, with support from partner Kuhne, GmbH in Germany. A complete lab line is currently being installed in the Kuhne Germany plant to facilitate local applications testing and sales. The line includes the company's newest generation medical modular extruder with the latest AKcess II touch screen control system. The company is also working on applications for both China and India, the two largest countries with the fastest growing economies. In September, 2009 American Kuhne signed an agreement with HnG Medical of Zhejiang, China to provide technical sales support specifically for the fast growing medical market in Asia. American Kuhne supports their presence in the medical industry by attending all medical shows in North America - running a live medical tubing line at the MDM West show in Anaheim, CA every year. The company will also be exhibiting at MEDTEC Europe in Stuttgart, Germany in March 2010 and MedTech China in August of 2010.



### About American Kuhne, Inc.

American Kuhne, Inc. is a leading worldwide supplier of standard and customized single screw extruders, feed screws, extrusion systems and extrusion process controllers. Customers range from small custom extrusion shops to Fortune 500 and 1000 companies. They rely on American Kuhne products for superior design and value, as well as American Kuhne's engineering and service specialists for exceptional long-term support. AK was founded on three basic core values: Supply the most advanced machinery with the best process support and outstanding customer service.

Unmatched in the industry, the company offers:

- **No Risk Guarantee**
- **Three Year Warranty**
- **24/7 Service**
- **Wet Testing Prior to Shipment**
- **Free Spare Parts**
- **Fair Spare Parts Pricing**

Extruder sizes range from 1/2" through 12-inch. They are designed and built in Ashaway, RI. Turnkey pipe, tubing and profile systems are also developed, tested and manufactured within their plant. In addition, the company also maintains a fully instrumented extrusion lab with a high-speed computerized data acquisition system available for free customer trials. ###



The New Ultra R/S Extruder for Silicone Applications provides dramatic improvements in process performance, serviceability, and longevity.

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