Sodick Milestones

For over 30 years Sodick has been manufacturing EDM machines that are the best in the world. As the industry leader, Sodick is committed to developing products to the highest quality standards and this commitment applies equally to providing advice and support in all the technical aspects of applications, training, customer and after-sales service.

1963	Mr. Toshihiko Furukawa discovered “No-wear” electric discharge circuits; the foundation of Sodick’s EDM technology
1976	Sodick established in Yokohama City by Mr Toshihiko Furukawa. World’s first NC Die Sink EDM with microcomputer launched
1980	First Sodick factory, the Fukui production plant, opened in Japan
1983	Sodick Europe GmbH established in Frankfurt, Germany
1999	Launch of the AQ Series, the world’s first Linear Motor Drive EDM
2005	Celebration marking the production of Sodick’s 10,000th Linear Motor Drive EDM
2006	Launch of Sodick’s unique worldwide 10-year Accuracy warranty for Linear Motor Drive machines
2008	Total number of Linear Motor Drive machines shipped by Sodick reached 20,000
2013	Second Thai factory started operation, currently producing 40% of all Sodick products sold worldwide

Tokyo Denki University Awards Honorary Doctorate to Toshihiko Furukawa

In 2013, Sodick Chairman and Representative Director Toshihiko Furukawa was awarded an honorary doctorate by Tokyo Denki University in recognition of his contribution to advances in mould processing technology. Mr. Furukawa’s invention of a No Wear electrode circuit in electrical discharge machining was critical to the development of EDM machines, while his spirit of development has inspired generations of young technicians to continue his quest for technical innovation and excellence.

Sodick’s European Headquarters is located in Coventry, England, where the latest Sodick technology is displayed and demonstrated in its extensive showroom. Full sales, service and marketing support for the whole European market and complete technical and application support for all Sodick’s European dealers are also provided from the company’s Coventry facility.

Positioning accuracy 10 years guarantee Sodick

Sodick

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Sodick Tees off at St Andrews

Sodick EDM boosts Academic Research

St Andrews ©Guthrie Aerial Photography

St Andrews, situated on Scotland’s bracing East coast, is best known for its two most distinguished institutions, “The Royal and Ancient” and the University.

The internationally famous St Andrews Old Course has seen every development in the game of golf over its 600-year history, and just as the “Royal and Ancient” attracts the cream of the world’s golfers, so leading academics are drawn to the town’s equally venerable University.

As the third-oldest University in the English-speaking world, St Andrews has an international reputation for the quality of its teaching and research - and it is the highly respected School of Physics and Astronomy that has installed the University’s first Sodick EDM machine.

Picture Courtesy of University of St Andrews

Top: *Aerial view of St Andrews*

Above: *University of St Andrews*

Left: *Duke and Duchess of Cambridge at St Andrews Gala Dinner 2012*

Far Left: *Royal and Ancient Golf Course, St Andrews*

Sodick

Sodick Technology Assists International Physics Research at St Andrews University

The School of Physics and Astronomy, ranked as one of the top Physics Department in the UK, with 30 permanent academic staff and nearly 200 research staff and students, undertakes a number of significant research programmes in areas including: astrophysics, condensed-matter physics and photonics. Recent highlights include: the theoretical prediciton of invisibility cloaking, the development of diode-based skin cancer phototherapies, the extreme slowing of light in optical waveguides and the discovery of cool earth-like planets through gravitational microlensing.

In support of these activities, the School invests heavily in the equipment in its workshop, including the installation of a Sodick VZ300L, an entry-level wire EDM providing all the benefits of high quality, accuracy and cutting speeds that are expected from Sodick technology.

"It is essential that we invest in advanced technology in order to maintain our position at the forefront of research into condensed matter physics"

As Professor Ifor Samuel, Director of Research for the School of Physics and Astronomy, explains; "It is essential that we invest in advanced technology in order to maintain our position at the forefront of research into condensed matter physics; exploring new states of matter, super-conductivity and quantum computing."

Since its arrival the Sodick machine has been producing bespoke parts for research projects, machining metals such as aluminium and stainless steel, through to more unusual materials including molybdenum foil and oxygen-free copper.

Workshop Manager, David Steven, describes the benefits of the Sodick technology; "Almost all the parts we produce are one-offs, four or five would be a big batch. The EDM machine has provided us with numerous advantages that have enhanced our service to the School of Physics and Astronomy. A number of the physics projects relate to the field of cryogenics, so oxygen-free copper is a preferred material because it won't gas-off when frozen."

"Having this kind of technology has made an enormous difference regarding ease of programming, as well as speed and accuracy"

Having the ability to program offline has provided a significant boost to the workshop. Now, thanks to the introduction of the Sodick VZ300L, professors, doctors and students participating in research programmes produce component designs using CAD software, which are subsequently transferred to FeatureCAM software where the wire EDM program is created.

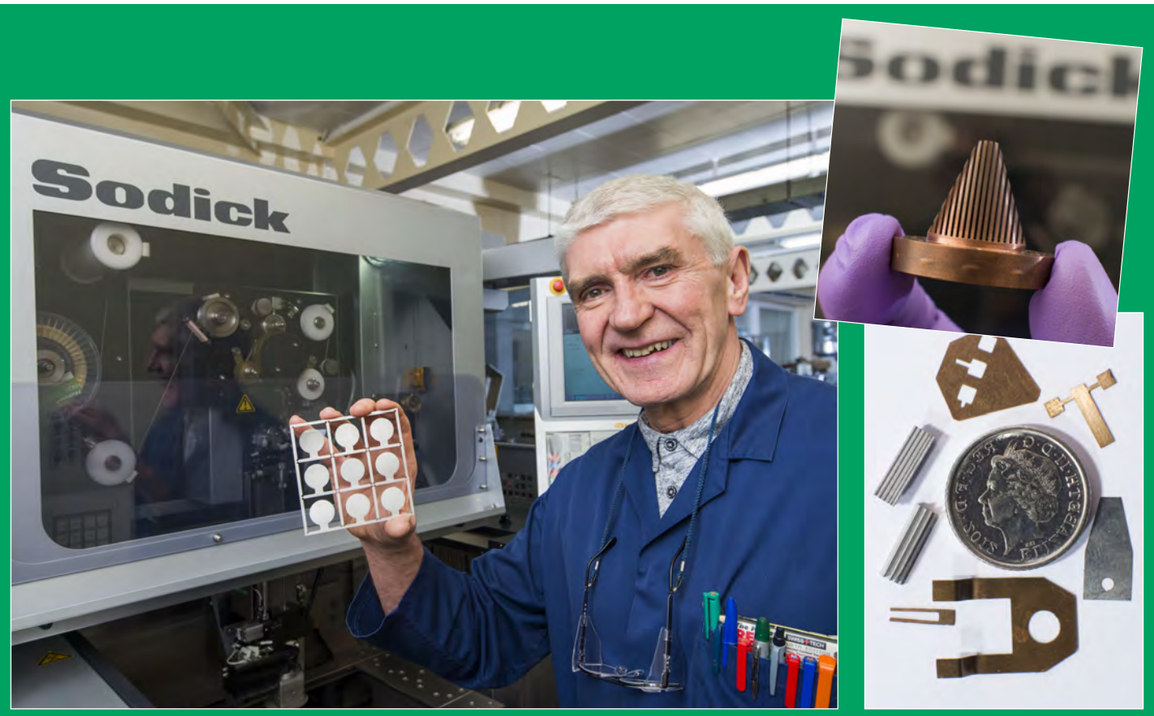
"Having this kind of technology has made an enormous difference regarding ease of programming, as well as speed and accuracy," says Mr Steven. "It also means that any misinterpretation of drawings is now eliminated."

According to Mr Steven, the parts that are wire cut in the workshop are often extremely complex and feature tight tolerances. This is where the Sodick's VZ300L linear motor axis drives with zero backlash, coupled with glass scales in the X, Y, U and V axes, ensure precision cutting and positioning accuracy.

"Another trend is that many of the components and features are getting increasingly small," he says. "We recently wire cut some 0.3 mm wide slots, which is about as small as we can get using 0.25 mm diameter brass wire."

Aside from parts for research projects at the School of Physics and Astronomy, news of the Sodick VZ300L has spread to other Schools in the University, which means the machine is now undertaking work for the School of Geography and GeoSciences, as well as the School of Medicine. Even the University's Maintenance Department is requesting parts.

"The University celebrated its 600th anniversary in 2013 and some of the door keys here are probably not far off the same age," says Mr Steven. "We recently had to wire cut a key for the Maintenance Department from a die cast blank we found online. The key was about 150mm long and I'd never seen anything like it in my life. Fortunately, with the Sodick, it was easy."



Above and right: *Sodick Machine installed at St Andrews University*

Left: *Components machined on Sodick machine installed at St Andrews University*

"Another trend is that many of the components and features are getting increasingly small"