

Developing cutting edge technology with a customer focus SIPOS Aktorik: part of the AUMA Group

SIPOS

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It has been almost a year since SIPOS officially launched their latest actuator, the SIPOS SEVEN, during the Valve World Expo in Dusseldorf. With the SIPOS SEVEN, the company is aiming to set a benchmark in actuation and indeed the product literature is packed with new features and technical information. Keen to learn more about the SIPOS SEVEN as well as the sales and management team's thoughts on potential sales markets, Valve World dropped by SIPOS' headquarters in Altdorf, near Nürnberg, Germany.

By David Sear

The SIPOS SEVEN standing proudly on the conference table in SIPOS' headquarters really does look the part. The solid grey housing appears sturdy enough to withstand the rough and tumble of any process plant, the large, full-colour display panel hints at a product that is exceptionally user-friendly whilst the prominent "drive controller" button wouldn't be out of place on an expensive motorcar.

It's clear that a lot of thought has gone into the SIPOS SEVEN and that is confirmed by Managing Director Dr. Suckut who talks about the extensive user feedback that has been incorporated into this latest model. "We aren't just interested in

technology for technology's sake; every feature we build into our actuators is there for a real purpose. And we make sure that the technology we include is simple to understand and easy to install."

Mr. Steffen Koehler, an Area Sales Manager, needs no second prompting and jumps up to demonstrate exactly how user-friendly the SIPOS SEVEN really is. As he shows, the central drive controller makes it child's play to access and select all of the actuators many features and options. "With the multi-purpose dial we have avoided the need to install separate buttons, making the SIPOS SEVEN very intuitive to operate. Also, the drive controller is ideal for use in extreme

climates as it can be operated even when wearing thick gloves."

Mr. Koehler continues by saying that, with the SIPOS SEVEN, operators no longer need to first read or even bring along a complicated instruction manual. "As you can see, for each separate action we provide step-by-step on-screen animations and instructions that guide the operator throughout the entire procedure." As Mr. Koehler further explains, simplifying the human-machine interface could be more and more important given the trend to reduce staffing levels. "As skilled staff retire new field operators simply don't have the time to learn complex procedures. So having easy-to-follow instructions accessible



on the SIPOS SEVEN is a real benefit. Whilst our actuators are increasingly sophisticated, the level of technology is definitely not off-putting to users."

Although the drive controller facilitates use of all the SIPOS SEVEN's features, Mr. Koehler notes that built-in user levels are available to prevent unauthorised operation. "For example, plant operators can be allowed access to the functions they need, but other features can be password protected to prevent key settings from being inadvertently changed."

Asked about future technology that might be integrated into SIPOS' actuators, Dr. Suckut suggests they could potentially be used as a gateway to multiple field devices such as pressure and temperature gauges. "A typical plant will have dozens if not hundreds of our actuators, all installed at critical points and all wired back to the DCS. So what could be easier than simply connecting field devices to the closest actuator and using the existing network to transport digital information to the control room?"

Customer alignment

Technology is without doubt a major spearhead at SIPOS but the company is not operating out of an Ivory Tower. Indeed, SIPOS takes great pains to remain aligned to the needs of customers and to respond quickly to global mega-trends.

Dr. Suckut: "we are not in the business of developing esoteric products and hoping to find a market for them afterwards. Instead, we are in constant discussion with our existing client base as well as new prospects, with the clear goal to fully understand and react to their needs. What they tell us leads to brainstorming sessions and prompts research and development projects: the R&D department is definitely one of the keystones in our company." Asked to give an example of how external factors can influence internal research, Dr. Suckut notes how politicians are mandating the increasing use of green power. "In Germany and in other countries too there is a drive to use renewable energy sources wherever possible. Now the challenge with photovoltaic systems and wind turbines is wide fluctuations in supply. So the energy companies are constantly looking to see what power sources are available and matching those as efficiently and economically as possible to meet the prevailing demand. This means they need almost immediate access to conventional power plants such as gas turbines, lignite facilities and coal-fired power plants, etc. These plants are therefore no longer being run under steady-state conditions but may be required to start up or power down many times a day. As you can imagine, this development does impact on actuator selection, as plant owners now need actuators that can be operated much more frequently than ever before."

An additional trend in the power industry that is having an impact on actuator selection is the drive to operate power plants even more efficiently, adds Mr. Koehler: "in a competitive market like electricity generation every little gain in performance helps. Power plant efficiency used to be measured in percentage points, but we are now seeing improvements of one hundredth of a single per cent. As power plants try to squeeze the maximum possible out of their systems they need actuators that are not just robust and responsive, but also incredibly accurate as well. So again we are seeing increasing expectations for actuator performance." SIPOS is in close contact with clients and responding to trends. Dr. Suckut: "for



Real-time communication solutions are part of SIPOS' comprehensive range of electric actuation solutions.

example, regulators in some countries are setting emissions standards for valves as low as 100 ppm for greenhouse gases. Obviously it will be up to the valve manufacturer to achieve that goal as he thinks best, but if for example they change the design parameters of the stuffing box then that could well increase the torque required to operate valves. So our customers will be turning to us for more powerful actuators."

Solutions provider

Listening to customers' needs is one thing; developing suitable products that



Specialised technology including an integrated frequency converter enables SIPOS to provide actuators with variable speed control. Soft-starts and finishes are facilitated, avoiding problems such as water hammer.



SIPOS' impressive purpose-built Altdorf facility.

meet these demands is of course quite another. This is why SIPOS maintains a very large R&D facility with, as Valve World discovered on a quick walk-through, a high percentage of engineers. What was also surprising was the wide variety of disciplines these engineers represent: not just mechanical and electrical fields as might be expected, but software, control and process engineering too. Dr. Suckut explains: "in the past we would have talked almost exclusively to the buyer's electrical engineers and from time to time to mechanical engineers as well. But nowadays plants have shifted their focus to a holistic approach that encompasses the operation and

automation of the entire plant. So in consequence we are increasingly discussing what our actuators can do and how they can be linked up to the plant's DCS with control engineers and process engineers. This is a shift which we definitely expect to continue as the possibilities for integrating our actuators using Fieldbus, Profibus, etc, are tremendous." Mr. Koehler: "this is a good example of why we say that SIPOS is a solutions provider. So yes, what we assemble and deliver may be a stand-alone actuator, but for the client it represents much more than that; our actuators are tools which will be integrated into the plant to deliver real benefits. We offer a highly responsive service and have a strong

reputation for responding at short notice, coping with high variance to provide customised solutions."

From the R&D department it is just a short step to the factory itself, where each actuator is assembled to order by a single craftsman. The entire factory operates with a calm efficiency, and it is quite believable to hear Mr. Koehler say that logistics experts were recently brought in to assess and streamline the flow of components. Not only is it efficient, the factory is also remarkably quiet. Mr. Koehler: "there's a good reason for the lack of noise, namely that all machining is outsourced. In fact, most of our machining needs are met by our parent company, AUMA, at their well-appointed Müllheim facility. This is one of the clear advantages of the AUMA group that we can benefit from economies of scale in manufacturing as well as procurement." One potentially surprising feature of the factory is the presence of an automated spray booth. After all, it is common knowledge that SIPOS uses a unique aluminium alloy for its actuators which is inherently corrosion resistant. Mr. Koehler: "for aesthetic reasons if nothing else we do like to give our actuators a final coating. Moreover, with our own painting unit we can easily apply different colours according to individual customer requests." Finally, on the way out of the factory Mr. Koehler points to one of the side walls. "Our building has been designed such that this wall can be easily removed should we need to add on additional production



SIPOS offers particular specialism providing extensive electric actuator services for the power industry.



Dr. Thomas Suckut, Managing Director of SIPOS Aktorik.

space. The land is already available so we can ramp up production as and when necessary."

Premium actuators

Back in the comfortable conference room, Valve World decided to ask SIPOS where they see future sales. Dr. Suckut: "let me start by talking about our large installed base of actuators – well over 250,000 units. We are well established in power plants but also in facilities such as steel mills, paper mills, sugar plants, cement plants, water pumping and distribution systems, etc. This means there are a vast number of companies and engineers who already know and trust the SIPOS name. Future demand from those existing customers alone

will drive sales for many years to come. And companies are not simply waiting until an actuator breaks; many are looking to upgrade to the latest technology as soon as possible. For example, we recently received an order from a power station for our SIPOS SEVENs to replace older actuators which were still in perfect working order but did not offer the wide range of features available in the SIPOS SEVEN."

Closer integration into the AUMA Group is also expected to deliver additional sales opportunities from new customers, adds Dr. Suckut. "Thanks to the AUMA group we have sales teams in over fifty prime locations. So we are already benefitting from a much greater reach into new markets. Incidentally, that

is why we organise regular internal training courses, to ensure that everyone within the AUMA Group can speak to customers with knowledge and authority about all our products."

Dr. Suckut concludes by bringing the conversation back to its starting point – technology. "As you have seen, in each and every department, be it assembly, research & development, sales, etc, we put a lot of time and effort into producing cutting-edge actuators. Technology is our real strength, our customers tell us they value the high technical standard we set plus the benefits that delivers and that is why they specify premium actuators such as our SIPOS SEVEN."

The SIPOS 5 electric actuator continues to be supplied and supported.



A section of SIPOS' electric actuator production facility.

Facts & Figures

Name:	SIPOS Aktorik
Website:	www.sipos.de
HQ:	Altdorf, Nürnberg, Germany
Products:	Electric actuators
Markets:	Include power (conventional & nuclear), water pumping and distribution systems, steel mills, paper mills, sugar mills, cement plants
Owners:	SIPOS is a member of the AUMA Group, which includes Drehmo, GFC and Haselhofer. For more information, please read Valve World's recent interview with AUMA's Mr. Matthias Dinse and Mr. Ferdinand Dirnhofer [www.valve-world.net/pdf/auma_a_company_in_motion.pdf]



Plant improvement programmes are supported by SIPOS Aktorik's full service actuation support.