

SIKORAEXTRA

Your magazine for Hose & Tube | Sheets

CENTERWAVE 6000 – new model

04

How to measure premium microducts
quickly and precisely

07



Dear readers,

The new SIKORA EXTRA is available! In this issue we provide you with exciting topics around quality control and process optimization in the hose & tube industry. Keeping an ear to the market – this has always been our maxim. To meet your customer demands, we have extended our CENTERWAVE 6000 product family. Learn more about the brand new model.

Dr. Christian Frank
CEO SIKORA AG

Furthermore, we will show you how the X-RAY 6000 PRO can be used for quality control of rubber high-pressure hoses and for measuring microducts. In addition, Christian Schalich, Head of Sales – Hose & Tube, reports in an interview about current projects. In addition, we would like to introduce you to our extensive maintenance and calibration programs and report on our international growth.

Enjoy reading this issue!

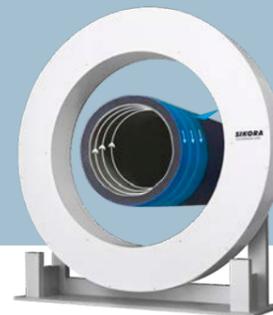
Sincerely,

Dr. Jörg Wissdorf
Executive Board SIKORA AG



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CENTERWAVE 6000 – NOW ALSO FOR PIPES UP TO 1,200 MM DIAMETER

New CENTERWAVE 6000/1200 model available for process optimization and quality control of plastic pipes

SIKORA offers the CENTERWAVE 6000 for the measurement of wall thickness, inner profile and diameter as well as ovality of plastic pipes. Now a new model is available, which specifically covers diameter ranges from 250 to 1,200 mm [10 to 48"]. The CENTERWAVE 6000/1200 thus specifically meets the requirements of large pipe manufacturers.

The new model's compact design makes it easy to integrate into production and makes it particularly suitable for extrusion lines producing pipe diameters of up to 1,000 and 1,200 mm [39.4 and 48"]. In-line, the system supports immediate

centering and reliable quality control. For the American market, the new model also covers the common 48" IPS and DIPS standard.

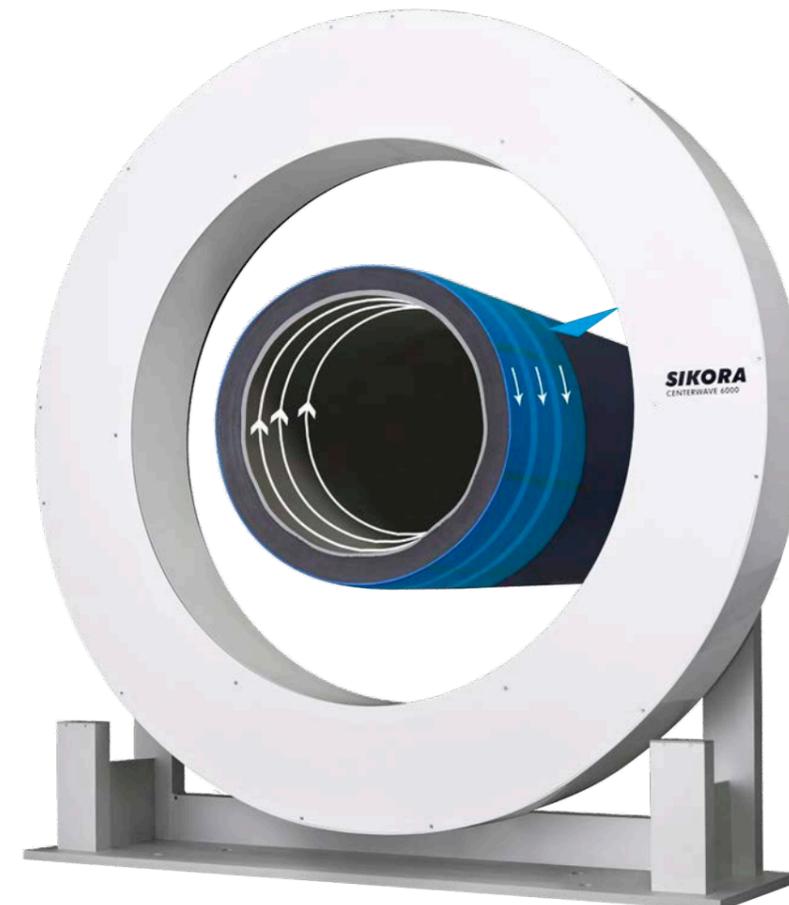
Small pipes from 60 mm [2.3"] as well as large pipes up to 3,200 mm [126.0"] diameter – all models of the CENTERWAVE 6000 device series are characterized by their innovative measuring principle based on millimeter wave technology. Operation is intuitive at the push of a button. Once switched on, the operator immediately receives continuous and precise measured values – without presetting the product parameters and without any calibration.

The CENTERWAVE 6000 is equipped with a transceiver that rotates permanently. Due to the rotation speed and the line speed running parallel to it, the measurement takes place in the form of a helix structure in the direction of production, ensuring 100 % coverage. In this way, the wall thickness, diameter and inner profile are recorded without gaps both over the entire circumference and in the longitudinal direction of the pipe, and min. and max. values are reliably determined. With each rotation, the measuring spot overlaps. Thus, the inner contour of the pipe is precisely mapped and abnormalities such as sagging are immediately detected

so that countermeasures can be initiated at an early stage. In addition to measuring all relevant pipe parameters, the CENTERWAVE 6000 also offers automatic control of the extrusion line taking into account the standard deviation. This avoids over-consumption as far as possible and achieves a higher degree of automation of existing plants. This enables an amortization of significantly less than one year.

Did you know?

According to the physical law "angle of incidence equals angle of exit", only the measured values that are at 90 degrees to the sensor are directly reflected. All other beams are deflected more strongly and no longer reach the sensor. In systems with static sensors, this results in gaps between the individual fixed measuring points, which – depending on the number of sensors installed – vary in size and thus prevent an exact determination of the minimum wall thickness. In systems with rotating sensors, on the other hand, the millimeter waves always strike the measured object at a 90 degree angle and are reflected directly. This creates the prerequisite for a gapless, 360-degree measurement over the entire pipe circumference.



"ONLY AS A TEAM WILL WE ACHIEVE OUR AMBITIOUS GOALS ..."

Interview with Christian Schalich, Head of Sales – Hose & Tube SIKORA AG



Mr. Schalich, you have been responsible for the business area Hose & Tube at SIKORA since 2018. Recently, there have been some restructurings in the Sales department. How does this affect your work and what does this mean for your customers?

The aim of the realignment in Sales is to focus more strongly on the individual business areas in order to be even closer to our customers with industry-specific specialists. My tasks here include the strategic alignment of the Hose & Tube business area and the expansion and training of our international Sales team. Only as a team will we achieve our ambitious goals and, if possible, even exceed them. We have grown in all subsidiaries worldwide since 2021 and now have a dedicated Sales team per business area. For example, we opened an office in Lodz, Poland in 2021, bringing the number of international SIKORA locations to 15. Due to our continuously growing Sales and Service team, we can respond even more specifically to the individual needs of our customers and provide them with the best possible support in the local language. This is also reflected in the satisfaction of our customers.

After the trade show business slumped in 2020 due to the pandemic, there were the first rays of hope in 2021. How was it for you to get a taste of trade show air again?

After what felt like an eternity without "real" or direct customer contact and without trade show visits, I was able to attend the PPXX conference in Amsterdam in September 2021. The atmosphere was fantastic and it was great to see both

old acquaintances and new faces after almost two years. In October, we continued with the first trade fair, FAKUMA in Friedrichshafen. You could see how happy people were to be able to exchange ideas in person again. The possibility of meeting virtually will certainly continue to accompany us in everyday life, but a face-to-face conversation remains irreplaceable, which is good.

Internationally, too, our team has already had good discussions with our customers at MD&M WEST in the USA, INTERPLASTICA in Moscow and PLASTEX in Cairo. The highlight in 2022 will certainly be K in Düsseldorf in fall. I really hope that by then it will again be possible to welcome visitors from all over the world to our stand.

What technological innovations can customers expect in the coming months?

I don't want to anticipate too much, but I can reveal that we are working very hard on technical innovations that we will be presenting at K in October. We have taken our customers' wishes to heart and will present some highlights here.

What are your plans for the coming period?

Professionally, I would like to further promote the growth and training of the international sites. I can therefore hardly wait to visit the local teams in person again. Privately, I'm looking forward to finally meeting friends and family again without restrictions.

HOW TO MEASURE PREMIUM MICRODUCTS QUICKLY AND PRECISELY

Efficient quality control with the X-RAY 6000 PRO

The expansion of the optical fiber network is leading the way for the increasing digitization of our society. According to a forecast by the German Broadband Communications Association (BREKO)¹, Germany alone will have at least 43 billion euros available for the commercial expansion of optical fiber networks between 2021 and 2026. Against this background, demand is also rising for microducts that enclose the optical fiber cables as a protective channel. As the optical fibers are blown into the ground only after the installation of the microducts, the dimension of the microducts has to be permanently monitored. Here, SIKORA's X-RAY 6000 PRO is the first choice.

The X-ray based X-RAY 6000 PRO measures the inner and outer diameter, the eccentricity as well as the total wall thickness of microducts even with different material layers continuously already in the extrusion process. All measured values are available immediately with the start-up of the line and are visualized on the 22" TFT monitor of the ECOCONTROL 6000 processor system.

The data can be used for distortion-free control of the extrusion process, thus ensuring fast and precise quality control. Less start-up scrap is produced and good production is significantly increased. Furthermore, the automatic control of the wall thickness to the minimum value leads to a significant increase in efficiency with simultaneous material and cost savings. The X-RAY 6000 PRO guarantees compliance with microduct specifications, consistent quality and reproducible results. This is all the more important as even the smallest deviations, for example from the inner diameter, could result in the specified number of optical fibers getting stuck in the pipe during blowing.



Various applications

SIKORA's X-RAY 6000 PRO is not only convincing in the quality control of microducts. Rather, it stands out due to its wide range of applications: Single-layer and multi-layer tubes, pipes or hoses made of all common plastics and rubber with diameters from 0.65 to 270 mm [0.26 to 10.6"] can also be measured with the X-RAY 6000 PRO series.

¹ Source: BREKO Bundesverband Breitbandkommunikation, Glasfaser Journal Edition 2021, p. 3: <https://www.breko.de/site/assets/files/14622/breko-glasfaser-journal-2021.pdf> (March 30, 2022)

RELIABLY DETECTING SURFACE DEFECTS ON THE COOLED TUBE OR PIPE

How to avoid complaints by using SIKORA measuring technology

Measuring tube and pipe dimensions after the vacuum tank has long been an integral part of comprehensive inline process control. However, a new comparison of product parameters at the end of the extrusion line also offers tube and pipe manufacturers attractive advantages.

The SIKORA diameter gauge heads of the LASER Series 2000 and 6000 are versatile applicable in the line. In addition to the common wall thickness measurement after the vacuum tank, for example by SIKORA's X-RAY 6000 PRO X-ray device, another LASER gauge head can be installed at the end of the line where the tube or pipe is already crystallized. On the one hand, the diameter values of the cold measurement provide information about the shrinkage behavior of the tube respective pipe. On the other hand, an additional ovality measurement is thus realized.

Furthermore, the tube or pipe surface is inspected for defects and protruding defects are reliably detected. This final quality control leads to the avoidance of complaints by the end custom-

er. The combination with an ECOCONTROL 600 processor system (with 8.4" touch screen) enables the measuring values to be logged in detail at the end of the line. The installation of a LASER gauge head is thus an attractive option for tube and pipe manufacturers for a final quality control at the end of the line.



The measured values of the LASER Series 6000 sensors are visualized in real time on the ECOCONTROL 600.



A LASER gauge head detects defects on the surface of the tube

Do the test!

Depending on customer requirements, SIKORA offers flexible solutions from 2 to 12 measuring axes. Our SIKORA Sales team has developed its own tool for this purpose, which calculates how many measuring axes are required for a 100 % surface detection. We perform the calculation together with you in conversation to determine the best solution for you.

If you would like to receive more information about this, please contact us at: sales@sikora.net.

SIKORA CARE PACKAGE – WE ARE HERE FOR YOU

Tailor-made maintenance and calibration

SIKORA offers many different devices and technologies to ensure the product quality:



X-ray technology of the X-RAY 8000 and X-RAY 6000, laser technology of the LASER Series 2000 or optical inspection cameras of the PURITY SCANNER ADVANCED and many more.

SIKORA devices are in use for many years and still measure, control and inspect as accurately as on the day of delivery. A calibration (in the sense of alignment/adjustment) to maintain the measuring accuracy is not necessary for SIKORA devices. However, certain international norms and customer requirements make regular calibrations necessary. For exactly this purpose SIKORA offers the CARE PACKAGE:



SIKORA calibrates measuring, control and inspection devices in operation regularly – according to internationally applicable standards. On site directly

in the production facility. Including certification according to DIN EN ISO 9001 specifications and including all necessary and certified test equipment provided by the SIKORA Service Engineer.

The operational readiness of the complex technologies is significantly increased by regular maintenance. Therefore, professional maintenance is an integral part of the calibration by SIKORA Engineers.

Customers thus benefit from regular maintenance and professional replacement of wear parts. Any abnormalities are immediately repaired by the SIKORA Service Specialists.



SIKORA maintenance programs stand for a constantly high device availability. Appointments for calibrations and maintenance can also be booked without contractual commitment. Consultations and maintenance programs are individually tailored to the devices and needs of the customers. For regular use of this service, SIKORA recommends the discounted maintenance programs with a term of three or five years.

Save effort, time and money!



For more information about our SIKORA CARE PACKAGE please contact your SIKORA Service Representative directly.

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The SIKORA CARE PACKAGE – all-round protection. More in our video.

SIKORA SUBSIDIARIES

New offices – more capacities

At SIKORA, approximately 350 employees give their best every day to offer customers and business partners optimal solutions. With 15 international subsidiaries, SIKORA is at home all over the world and the company continues to grow. In 2021 and 2022, four SIKORA subsidiaries moved into new offices.

SIKORA FRANCE already made a start at the beginning of 2021. The new office in Les Ulis offers on a total of 74 m² [88.5 yd²] sufficient space for the French team as well as storage space to always be able to offer customers the fastest possible solutions. Just 20 minutes by car to the nearest airport allow quick customer visits.

In June 2021, SIKORA BRAZIL moved into 81 m² [96.9 yd²] office and work space in São Paulo – storage space for service components and devices as well as a small service workshop included. Two airports nearby connect SIKORA BRAZIL with the rest of the world.

SIKORA MEXICO and SIKORA JAPAN used December 2021 to move into their new work places. 104 m² [124.4 yd²] in Mexico and 67 m² [80.1 yd²] in Japan will be used as warehouse, office and service space. In Japan, the direct connection to a high-speed train station (Shinkansen) guarantees the mobility of the colleagues and also offers customers the quick and easy possibility to visit the SIKORA JAPAN office in Kanagawa. Thanks to the immediate proximity to one of the main roads, the Mexican subsidiary in Queretaro is also always flexible for customer inquiries.

2022 started with the relocation of the largest SIKORA subsidiary. SIKORA CHINA moved into its new premises in Fuzhou in March and now operates on 1,500 m² [1,794 yd²] – including various offices, a large service area as well as a 120 m² [143.5 yd²] showroom. Here, visitors have the opportunity to take a walk through SIKORA's history. A gallery with all important milestones of the company leads into the showroom, which offers space for all SIKORA devices.

All addresses and further contact information of the SIKORA subsidiaries can be found at www.sikora.net/contact.



Welcome at SIKORA CHINA's showroom

RAFFLE

1. What diameter ranges does the new CENTERWAVE 6000/1200 model cover?

2. At which trade fair can you meet Christian Schalich, Head of Sales – H&T, in October?

3. Which SIKORA system reliably measures microducts?

4. Which durations does SIKORA offer for maintenance programs?

5. How many subsidiaries does SIKORA have?

Get informed!

SIKORA offers a wide range of different devices and systems for measurement, control, inspection, sorting and analysis.

How well do you know SIKORA? Do you know the answers to our questions?

Little tip: You will find all answers in this SIKORA EXTRA issue.

Send us your solution via email by July 31, 2022 to: extra@sikora.net

You can win one of three Troika world stroller sets.



Your contact details will not be passed on to third parties. Each correct answer takes part in the raffle. SIKORA employees and their relatives are excluded from participation. Each player can only participate once. We value the first email, all subsequent emails will be considered invalid. The legal process is excluded.

GOOD LUCK!

NEXT EVENTS



- Würzburger Kunststoffrohr-Tagung | Jun 21-22, 2022 | Würzburg, Germany



- Pipes XIII Conference | Sep 6-7, 2022 | Johannesburg, South Africa



- K | Oct 19-26, 2022 | Düsseldorf, Germany

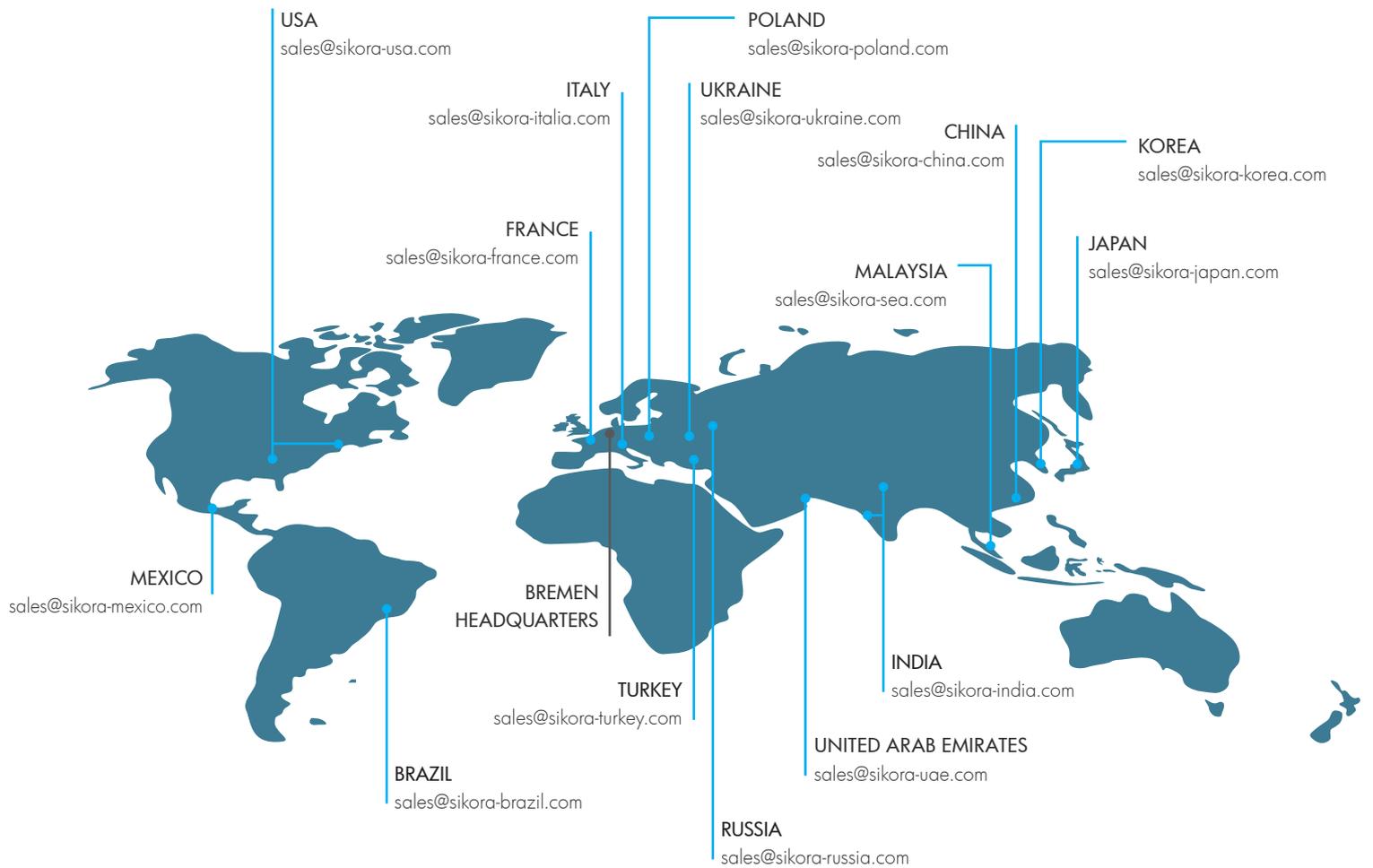
Sustainability at SIKORA

Our environment is important to you, but you do not want to do without the informative SIKORA EXTRA articles? Register today at extra@sikora.net and receive the SIKORA magazine conveniently via email instead of printed material.

SIKORA

Technology To Perfection

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