# X-RAY 8000 ADVANCED/NXT

Two perfect possibilities to control the quality of cables in CV lines



The X-RAY 8000 NXT is a proven tool that became globally an industrial standard for quality control at the production of medium, high and extra-high voltage cables in CCV, VCV and MDCV lines. It convinces by precise and reliable measurements of concentricity, wall thickness, diameter and ovality as well as by controlling cables with up to three layers. Today there are more than 1,000 X-RAY 8000 systems at customer locations worldwide assuring online quality control.

# Two perfect possibilities to control the quality of cables in CV lines

## An invention of SIKORA that decisively shapes the high voltage cable production

By using the latest analysis technology, the X-RAY 8000 ADVANCED/NXT is extremely powerful and reliable. These characteristics are of immense importance as CV lines, where the X-RAY 8000 ADVANCED/NXT is installed, produce high-quality cables, which are only used in demanding applications and need to provide unlimited reliability. It is the perfection, which is in every detail of the system, that assures safeness. The perfection of the Xray technology with Multi-Sensor-Technology, analysis and ceramic windows provides this safety.

#### Cable parameters in MDCV lines

For the measurement of the wall thickness, concentricity, diameter and ovality of high voltage cables in an MDCV line, SIKORA recommends the X-RAY 8700 NXT.

#### Save cold measuring values of the cable parameters

The X-RAY 8700 NXT measures the diameter, wall thickness and concentricity and is suitable for all cable types with solid, stranded or Milliken conductors and with single, double or triple layer insulation.

#### X-RAY 8000 ADVANCED/NXT - long-life technology

All measuring systems of the X-RAY 8000 ADVANCED/NXT family are equipped with XLL X-ray tubes (eXtra Long Life) that contribute to a long operation time with highest accuracy and reliability.

#### X-RAY 8000 ADVANCED/NXT for sector cables in CCV lines

Optionally, the X-RAY 8000 ADVANCED/NXT is also available as special edition for the measurement of straight sector cables.

### X-RAY 8000 NXT with Multi-Sensor-Technology (MST)

The SIKORA Multi-Sensor-Technology (MST) guarantees, in combination with two high speed scanners, accurate and reliable measurements of medium, high voltage and extra-high voltage cables, even when the cable is vibrating. Furthermore, due to the MST, every scan of the two scanners provides four measuring values, ensuring an extremely high accuracy.

#### New: X-RAY 8000 ADVANCED — Whereas others still measure, we already control

With the X-RAY 8000 ADVANCED, SIKORA introduces a system with state-of-the-art High Speed Technology (HST) that is tailored to the requirements of Industry 4.0. It represents an advanced alternative to the successful and established X-RAY 8000 NXT. The system – equipped with 16 measuring sensors – measures the diameter, wall thickness and eccentricity by a factor of up to 10 faster than the X-RAY 8000 NXT, and thus, is predestined for an efficient control.



Excellent are the advantages resulting from the centering as each change of the centering screws is immediately registered and visualized. The four times greater number of measuring points, compared to the NXT system, simultaneously leads to a measurement almost without delay and an immediate control. Both factors optimize the process and ensure the highest quality of the cables, at maximum material and cost savings.

#### X-RAY 8000 ADVANCED with High Speed Technology (HST)

The High Speed Technology (HST) is the latest innovation from SIKORA. The focus is on efficiency enhancement due to a fast centering and an automatic control of the product parameters. The basis for this are quick and reliable measuring values with the HST. For a fast update of the scan data, the system optimizes the scanning time by automatically adapting the scan path to the cable diameter.

# Technical Data X-RAY 8000 ADVANCED/NXT

Field of Application	CCV, VCV line operating with nitrogen and/or steam
Field of Use	Medium, high and extra-high voltage cables with XLPE, EPR*, EPDM, HYPALON insulation etc.
Product Diameter	X-RAY 8000 ADVANCED/NXT 10 to 92, 130, 168 mm for CCV lines X-RAY 8000 ADVANCED/NXT 10 to 140, 205 mm for VCV lines X-RAY 8700 NXT 10 to 94, 145, 180 mm at the end of CCV, VCV, MDCV lines
Measuring Accuracy	Wall thickness ± 15 $\mu$ m, ± 0.02 % Diameter ± 5 $\mu$ m, ± 0.02 %
Scan Speed	Up to 60 mm/s
Radiation	A dual safety system guarantees that the X-ray device can only be switched on when the safety of the operator is assured. Radiation measurements in direct proximity of the scanner box are below limiting values of all international regulations. As the windows for the measurement through the CV tube are made of ceramic, perfect safety is assured at that position as well.
Permissible Temperature	+ 5 to 50 °C
Cooling Water, Consumption	Approx. 70-150 l/h at max. 30 °C
Dimensions (Scanner Box)	Approx. 950 x 900 x 270 mm
	* 70 kV scappers for EPR cables with big diameters > 45 mm

# Your Benefits

- 8-point display of wall thickness and concentricity for three insulation layers
- XLL (eXtra Long Life) X-ray tubes
- Ceramic and NTX windows (Non Toxic X-ray) for lifelong operation without cleaning
- Optimized Multi-Sensor-Technology
- · Fast centering of the cross head and optimum quality and process control
- Measuring values immediately after starting-up the line, no calibration, no warm-up

# Additional features - X-RAY 8000 ADVANCED

- Faster recording of measuring data by a factor of up to 10 directly after starting up the line enables an immediate control
- Optimization of the start-up process
- · Assurance of the highest cable quality at maximum material and cost savings