

# VÅNTEC-1 DETECTOR FOR SUPER SPEED X-RAY DIFFRACTION



The VÅNTEC-1 detector features fast simultaneous recording of X-ray diffraction patterns over a wide  $2\theta$  angular range. The detector can be used in Snapshot mode (fixed  $2\theta$  mode) or in scanning mode. When compared to a point detector, the VÅNTEC-1 reduces overall measurement times drastically (providing similar angular resolution).

For the in-situ investigations of reactions or crystalline phase transitions, the VÅNTEC-1 offers snapshot capabilities with data collection times as little as 100 msec. with  $12^\circ$   $2\theta$  coverage. With a series of snapshots, a kinetic process is recorded like an X-ray movie.

The VÅNTEC-1 detector incorporates Bruker AXS' patented Mikrogap™ technology featuring very high amplification,

high peak-to-peak background ratios, high sensitivity for a wide range of X-ray wavelengths, and very good energy resolution. In addition, the VÅNTEC-1 detector provides extreme radiation hardness for long lifetime; an accidental exposure to the direct X-ray beam does not damage the detector. An electronically adjusted energy window allows you to optimize the detector for a specific wavelength to minimize the background scattering of fluorescence impact on the recorded diffractogram.

With the 50 mm x 16 mm active area and more than 1500 electronically selectable channels always operating, the VÅNTEC-1 is capable of diffraction snapshots of more than 100 times faster than conventional scanning detectors.

