Counting and sorting machines

Counting and sorting machines developed and created at Goznak are installed and work successfully at branches of the Bank of Russia. The specialists of the Company constantly improve the counting and sorting machines and adapt the special feature sensors within the counting and sorting machines to banknote of the new models of the Bank of Russia.

The BARS counting and sorting machines of the series 5000 possess great efficiency and a fully-featured system of assessment of authenticity, paying capacity and physical condition of the banknotes.

The major functions of the machine series are:
- Banknote counting;
- Authenticity, paying capacity and decay level assessment;
- Sorting by orientation, face value and decay;
- Recording of the sum and revision (in all modes).

Technical characteristics:
- Size – 1680 x 605 x 573 mm;
- The maximum speed of banknote supply is not less than 12 banknotes per second;
- Weight – 145 kg;
- The maximum counting and sorting speed is 36 000 banknotes per hour.

Special capabilities:
- Network integration of a few BARS machines into high-efficiency automated complexes of banknote data-flow processing;
- Installation of additional detectors for new banknote security features;
- Generation and delivery of standard and original control forms;
- Prompt transfiguration of the interface and the software adjustment tools;
- Remote diagnosis;
- Statistical data production on separate banknote series, rejection of banknotes of preset series.
Identification and sorting capabilities:

- Scanning of 100% of the banknote surface on the both sides;
- Size, discrepancy of the banknote geometry;
- Image in the visible, UV and IR spectra on the both sides;
- Image displacement in regard to the edges (cutting control);
- Image fragment displacement in the general image (composite banknotes);
- Fluorescence / phosphorescence of paper and ink;
- Magnetically soft / hard-magnetic materials in ink and paper;
- Existence of metalized band / thread;
- Minimum / maximum thickness, binarity;
- Serial number, match of numbers (composite banknotes);
- Lustrous objects (metalized strip, foil, hologram etc.);
- Covert security elements of the banknotes of the Bank of Russia;
- Stains, inscriptions, wrinkles, general wear and tear (contrast loss, paper and image chromacity change);
- Adhesive tape;
- Apertures, abruptions, tears, folded and ragged corners.

The desktop counting and sorting machine BARS of 5000 series possesses high technical and operating characteristics. It processes up to 40 thousand banknotes per hour and has scanners of the visible, IR, UV spectra, a magnetic detector, a metalized thread detector, a thickness and binarity detector, special security feature control detectors.

Additional functions include capabilities of connection of additional modules as well as additional detectors.

It is possible to configure the machines into the software and hardware BARS complexes for data-flow banknote processing. The BARS counting and sorting machine of series 5000 has adaptive characteristics for new face values and modifications of banknotes, new currency.