



FEATURES OF MANUFACTURING PHILATELIC PRODUCTS "ON DEMEND"

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One of the types of accidental products is marked and philatelic products (postage stamps and blocks, envelopes, postal cards, etc.). Currently, this direction is gradually gaining special demand both in the country and abroad. Postal issues are now bought not only to pay for postal services or to replenish one's own collections, but also to make an original gift.

The "Own Brand" service from "Ukrposhta" has gained wide popularity – the opportunity to produce a branded sheet, envelope or postal card with your own design. This service is used not only by ordinary people, but also by some companies, for example, in November 2022, Monobank ordered its own stamp from Ukrposhta for further use in marketing.

But since the circulation of such products is not always in the thousands or millions, the question arises of the possibility of manufacturing branded products in small and single editions.

Thus, the relevance of the chosen topic lies in the use of various digital printing technologies in the production of personalized branded and philatelic products in single or small editions. This will contribute to the development of the philately segment in both souvenir and advertising directions, and the determination of technological modes of printing, to achieve quality indicators close to offset prints, will contribute to the revival of interest on the part of buyers.

The purpose of the work was to study the quality indicators of prints obtained when reproducing an image on branded paper using various digital printing technologies, and to develop recommendations for preparing models of branded products for printing based on the results obtained [1].

From the definition of personalized postage stamps, it is possible to establish the presence on the stamp sheet not only directly of stamps and artistic fields, but also of coupons. For the fulfillment of personalized orders, Ukrposhta currently offers several templates of stamp sheets with different numbers of stamps and the corresponding number of coupons: 6, 9, and 28. A sheet of 9 stamps (fig. 1), format 220×154 mm, was taken for the study.

Today, the digital printing equipment segment on the market is represented by a large number of printers and printing machines of various technologies and configurations. Among the digital technologies used for printing on paper and cardboard, laser and inkjet should be singled out as the most widespread. In addition to them, the market offers models with LED, sublimation and solid ink technology – however, such options are much less popular due to the narrowness of the application niche, compared to laser or inkjet technologies.

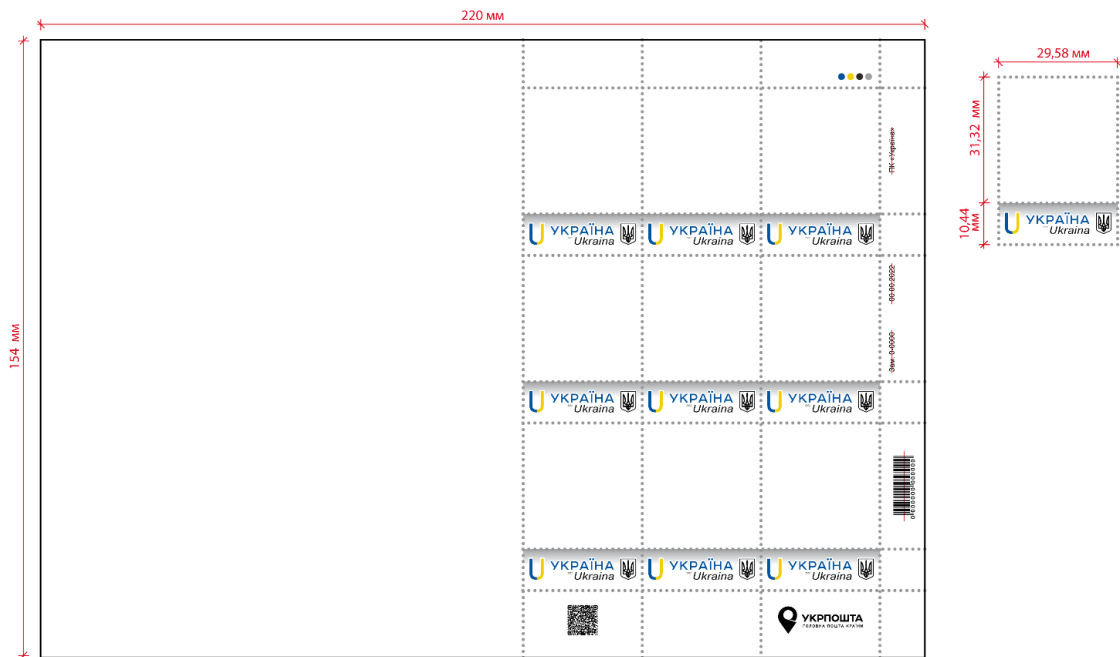


Figure 1 – Template of stamp sheets with 9 numbers of stamps for research

A test form will be developed for conducting research [2]. The equipment for printing was chosen according to different printing technologies: Xerox Versant 180 Press, Konica Minolta bizhub c224e, Epson Artisan 1430, Mimaki UJF-3042 FX. All prints were printed in the "best quality" mode that each of the used machines allowed to be set. According to the specifications, it provides printing with an actual resolution of 600x600 dpi. In addition, it should be noted that each device used original components and materials, such as inks or toners. Color profiles were not used when printing samples.

At the time of production of the test samples, the sheet printed on the Epson Artisan 1430 inkjet printer had ink bleeding. Therefore, this sample was not taken into account in further measurements and analysis. The sample printed on the Mimaki UJF-3042FX UV inkjet machine has a similar situation. Although the ink did not spread, it took on horizontal stripes that spoil the overall appearance.

Summarizing the results of the study of the color characteristics of the prints, namely: brightness index, color difference and color shade difference, we can conclude that all the studied prints have flaws in one or another area. However, the measured and calculated values generally agree with the visual assessment of the print colors. Laser and LED machines cope well with the task. LED machines may have a slightly worse reproduction of line elements, but better gradation indicators, although laser machines more accurately reproduce colors on marked paper.

References

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