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Development of Smart Assist Printing Enhances Efficiency for Continuous Printing of Short-run Work

To meet market demand for greater automation, easier operation and higher productivity particularly for short-run jobs, RYOBI MHI Graphic Technology Ltd. (Katsushi Hirokawa, President) has developed Smart Assist Printing to enable automatic continuous printing of multiple jobs with a single touch operation.

Smart Assist Printing can automatically perform nonstop printing of multiple job by single touch operation from ink preset, blanket cleaning, and plate changing to test print, register adjustment, density adjustment and production printing. After completing the ink preset, blanket cleaning and plate changing, sheets are automatically fed and test printing begins. During test printing a CCD camera installed on the press captures images of the printed sheets and the PQS-D printing quality control system performs inline inspection of printing quality. Register alignment and density adjustment are also performed without having to sample the printed sheets, and production printing begins once the register alignment and density are within the standard ranges. During production printing the PQS-D continuously performs printing quality inspection, density adjustment and monitoring register alignment. When production printing of the first job is completed, printing of the next job begins in a continuous printing cycle. The press automatically performs make-ready tasks that normally require sampling of the printed sheets, shortening make-ready time by approximately 4 minutes^{*1} per job. Besides markedly increasing production efficiency for continuous printing of short-run work, less operator skill and experience are required. (For work requiring customer verification of printing quality, a semi-assist mode allows the operator to determine whether or not to advance to production printing.)

In conjunction with the development of Smart Assist Printing, the printing quality control system's Press Information Edge function automatically sorts jobs in the optimum order according to the paper, ink, due date, and other conditions based on data sent from the printing company's main system. The density control system developed for the RMGT 10 series is also available for the RMGT 9, 7 and 6 series, improving density adjustment to reduce paper waste and quickly achieve stable ink density. Paper waste until stable density is achieved greatly reduces by up to 40%^{*1} compared to previous RMGT 9, 7 and 6 series models.

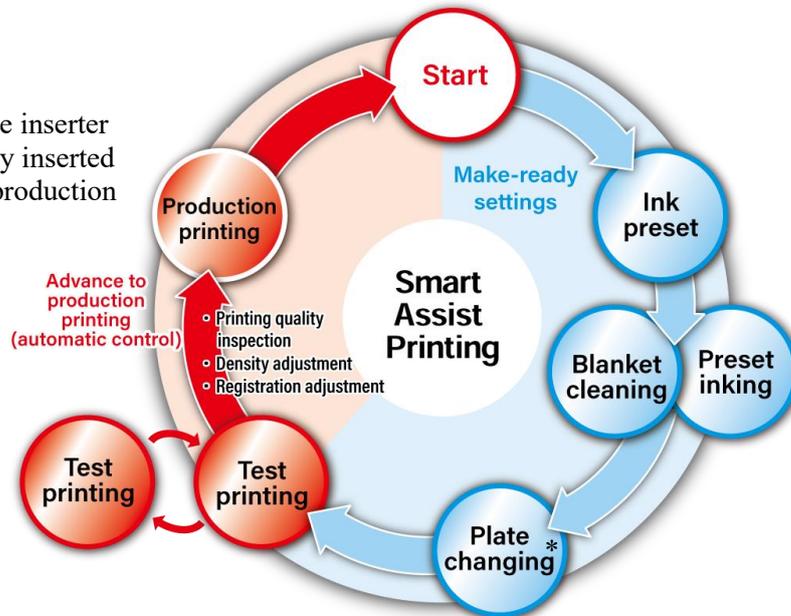
Smart Assist Printing is available as an option on the 1020/1060 mm format RMGT 10 series, the A1-size/A1-plus size RMGT 9 series, the B2-size RMGT 7 series^{*2}, and the A2-size RMGT 6 series. In addition to providing powerful support for operators by automating press operation, it also meets the need for greater production efficiency for diversified, short-run job.

*1: As measured by in-house staff. Results will vary according to operator experience and the printing conditions.

*2: Excluding RMGT 760 models

■ Smart Assist Printing cycle diagram

In case of using tape inserter tape is automatically inserted at start and end of production



Test printing starts automatically again when the registration and density are out of reference value for production printing.

When the production printing cannot be started, paper feeding stops.

* On RMGT 10 presses with a Simul Changer Parallel system, plate changing is simultaneously performed in parallel with blanket cleaning and preset inking.