Mitsubishi Heavy Industries, Ltd. (MHI) has successively announced new press models in its three main lines of sheet-fed offset, commercial web offset, and newspaper offset presses over the past two years, attracting the attention of the printing industry. These new press models are described below.

1. Background of development

With the ever-growing market need for diversification, there are no bounds to the trend of “multi-type and small-lot print runs.” Keeping pace with this trend, MHI has for several years promoted development of new machines, and has succeeded in launching new presses in all three printing press lines, gaining a high reputation from customers and drawing attention of the printing industry.

2. Introduction of products

(1) Sheet-fed offset press “DIAMOND Series”

The DIAMOND Series (Fig. 1) complies with customer needs calling for printing cost reductions due to today’s keen competition, and compared with the conventional press, drastically shortens make-ready time and reduces spoilage. In addition, operability has been greatly improved to make the press even more operator friendly.

The DIAMOND Series, announced at the Print '01 Show (in Chicago, U.S.A.) in September 2001 and the IPEX (International Printing Machinery Exhibition) (in Birmingham, UK) in April 2002, has drawn the attention of not only press users but also of competitive press manufacturers.

(2) Commercial web offset press “MAX Series”

The jobs in commercial web offset press market were so far limited mainly to medium and large size lots. However, with the diversification of needs, increasingly large number of companies have begun to take up jobs that conventionally belonged to the sheet-fed offset press market. Thus, the press most required now is one that shortens make-ready time and reduces spoilage.

The MAX Series (Fig. 2) is equipped with a new type automatic plate changer, which makes effective use of the shaft-less drive system, and the MAX SAVER waste-reduction software. The MAX Series shortens make-ready time and drastically reduces spoilage at the time of blanket cleaning by means of different speed control of printing units and web.

The plate change for 8 plates (4 printing units) performed by one person can be reduced to a 2-minute level, with make-ready time of printing job reduced to a third that of conventional presses. Preliminary announcement of this press was made to customers in Japan at the Paper & Printing Machinery Division in February 2002.

(3) Newspaper offset press “DIAMOND STAR”

In the newspaper printing industry, color printing and small-lot editions are prevailing in various countries, with improvement in job efficiency becoming a matter of top concern among newspaper...
publishers. The DIAMOND STAR (Fig. 3), the newly launched press by MHI has successfully shortened the required time per job through the production of 180,000 copies per hour, the highest printing speed in the world. With further advancements achieved in the reduction of spoilage and making effective use of the technology for shortening make-ready time, this press promises a large contribution to improving customer job efficiency. The DIAMOND STAR was announced through panel displays at the IFRA EXPO (Geneva, Switzerland) in October 2001.

3. Prospect and overseas development

The sheet-fed offset press “DIAMOND Series” has repeatedly been put on practical display at exhibitions, and orders received for the press show a steady increase. In the future further expansion is expected in sales mainly through the five MLP subsidiary sales offices around the world.

As for the commercial web offset press “MAX Series,” it has already been displayed several times in preview exhibitions and has gained a high reputation from customers in Japan and East Asia. Manufacturing has commenced on machines for American and European markets, with hopes for drastic expansion in future sales.

The newspaper offset press “DIAMOND STAR” is also drawing attention of customers both in Japan and abroad with its high speed and high efficiency. Sales are expected to expand in the future.