

Pearlescent pigments

Synthetically produced pigments that allow a mother-of-pearl effect (comparable to the inner layer of a mussel).

Offline

Offline finishing takes place as a separate processing step outside the actual printing process.

Drying modules

Sheetfed gravure presses are designed for use with water, UV, and solvent-based inks. A conversion of the drying modules is not necessary. The required dryers can be selected via the control station.

Spot coating

A spot coating is the application of a varnish in defined areas of a printed matter, highlighting these areas.

H.C. MOOG GmbH

Moog is the world's leading manufacturer of sheetfed gravure presses and is headquartered in Rüdelsheim on the Rhine River.

Exemplary areas of application

Due to the area of application, sheetfed gravure printing does not exclusively represent sheets which were pre-produced in sheet offset. Printing ahead of sheet offset is common. If, as an example, sheets with silver are to be pre-printed, which are subsequently printed in sheet offset with UV printing inks, gravure printing occurs before the sheet offset process.

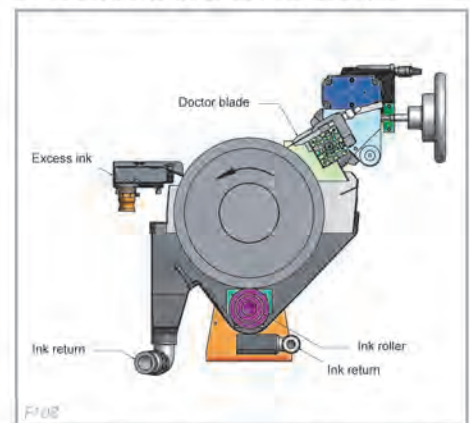
Sheetfed Gravure Presses

Sheetfed gravure presses play a decisive role in the finishing of printed matter. Examples of this are finishes with gold, silver, or pearlescent pigments, full-surface, or spot coatings with a high volume of varnish, embossing, etc. Sheetfed gravure presses are often used offline as a value-add to other printing processes, such as sheetfed offset printing. The use of machines in 3B format (74 cm x 104 cm) with machine speeds of up to 12000 imprints/hour is common.



After passing through the print stations, the sheets continue to the sheet output through additional drying modules that can be integrated if needed [5]. The drying modules differ depending on the type of drying. In the multi-tier delivery system [6], the refined, scratch-free printed sheets are ultimately deposited.

Print Stations in Sheetfed Gravure



Starting from the pre-printed sheets, they are put into the feeder [1] or are pre-stacked. Non-stop feeders are used, which enable a continuous supply to the printing press. The sheets are fed into the machine via a sheet feeder and aligned with the help of a pneumatically controlled side mark [2]. The continuous control is managed from the control station. The printing process then takes place in the first print station [3]. The print image is transferred directly from the print cylinder to the substrate, which moves atop an impression cylinder (double in size). This is followed by intermediate drying [4].

In terms of structure, a print station in sheetfed gravure is a system of rollers. The ink is fed with a pump from a container to an ink lip (milled aluminum), which colors the print cylinder shortly after the ink transfer. This ensures that the ink does not dry in the cells. The print cylinder then passes through an ink reservoir, in which an ink roller has been integrated. The rubberized or push-covered ink roller ensures perfect filling of the cells in the engraved cylinder with ink. Subsequently, the excess ink is removed from the print cylinder with an oscillating doctor blade. The doctor blade angle is adjusted via an angle scale during the printing process.

