



New Gravure Sheet-fed Printing Press 1-TBR Compact

H. C. MOOG GmbH is introducing a new single unit printing press to satisfy new market trends and offer enhancements for high quality refinements for premium quality printing products. This multifunction press has the following characteristics:

- Conventional gravure printing with solid gravure cylinders and [NEW](#) with digital printing plates
- Magazine cover printing (especially gold, silver and pearlescent pigments)
- Continuous tone print
- Full coverage lacquering, spot lacquering
- Refinement
- Full and partial embossing, micro embossing and random grain patterns
- [NEW](#) pressure cylinder for more stability
- Full and partial coating applications
- High gloss applications with [NEW](#) hot calendering cylinder temperature regulation up to 150°C with water based varnish for “green printing”
- Print for striking surface, surface structure and haptic effects
- [NEW](#) driers with combined Infrared and hot-air for more efficiency
- Utilization of alcohol- and water- based ink systems as well as UV-lacquers
- Sheet size of up to 29.1 by 40.9 inches

Based on this broad range of capabilities the **1 TBR Compact** is ideally suited as a single unit production tool, since multiple passes are possible with this machine as well as its use as a pre- or post-processing offline production step in combination with other sheet-fed printing processes.

The optimum combination of quality, wide range of special applications and economics favor the use of sheet-fed gravure in the development and production of creative and at the same time exclusive packaging.

In the completely new construction of the **1 TBR Compact** all the experiences of the last few years have been incorporated in the key component of a double sized impression cylinder manufactured with high quality casting. The line pressure particularly for embossing could be further enhanced without curtailing the life cycle of the equipment.

The **1 TBR Compact** uses the same standard cylinder size as the well established multi-colour type. The advantage of the common cylinder size is the availability and common cost for all packaging sizes that can be accommodated by the maximum format of 740 x 1040 mm (29.1 x 40.9 inches). By contrast to web based machines there is no need to adapt cylinder diameters. The usage of photopolymer plates is also cost efficient since it always uses the same standard plate size. The maximum printing speed of 10.000 sheets/hour is not impaired. The usage of photopolymer plates for sheet-fed gravure opens new short run editions with gravure quality.

The **1-TBR Compact** is an optimal complement to the standard program of 2 up to 8 unit gravure sheet-fed equipment that has been built for the past 60 years and that today is characterized through precision, automation and user friendliness. The printing substrate is precisely orientated in the preset-feeder to assure that subsequent passes are retained with high registration with the **1-TBR Compact**. Due to the compact measurement of the unit it can easily be integrated into existing production environments.

In the drying concept of the sheets Moog together with their supplier Grafix has gone in a new direction. The drying with frequency controlled radial blowers and heating cartridges can now be optimized for any substrate and ink film thickness from the operator panel. Following the printing zone the ink is partially dried with high speed air knives under normal room temperature that can be controlled for pressure and air flow. The subsequent cassette combination dryer IR plus HAK, UV – 3 X 200 Watt/cm (or IR+HK exchangeable) and HAK can also be controlled from the operator panel so that drying air speed can be optimized for the substrate and the required heating capacity. Between the first and second cassette is a build-in HAK unit for the exhaust to mix in with the air supply in the interest of energy savings that are notables in the calculation of the running economics.

Additionally new ink sumps have been developed that assure an absolute maximum of ink mixing with minimum usage. There are now a total of 3 types for different ink amounts. An inline viscosity control meters for high colour stability a known process for gravure production. Since each new product requires new cylinders or a new printing plate cell configurations can be optimized for the substrate and the ink characteristics such as pigment size so that no unknown parameters can influence the final high quality product quality.