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MAN Roland InlineFoiler Offers More Design at Lower Costs

Cold foil transfer opens up possibilities in application and design that cannot be realized – unless at high cost – with the hot foil stamping process used so far.

Endeavoring to find an economical and technically workable way of combining the two processes in one pass with printing, MAN Roland has invested in new technologies and produced innovations that are exclusively available to its customers and to users of MAN Roland presses. The following compares the two processes in order to highlight the special features and advantages of cold foil transfer, and to point out the possibilities provided by the process combination.

Two printing units for the process of cold foil transfer

Immediately conspicuous about the press are the two additional towers: they can be positioned on any two printing towers next to each other and allow stable foil guidance practically without distortion. Using two towers to carry superstructures for unwinding and rewinding the foil distributes the load evenly, avoiding excessive load on the individual tower. Two printing units are required for the actual transfer of the foil. In the first unit, special glue is fed from the inking unit to the printing material with the resolution and fine detail of an offset plate. In the next printing unit the foil is transferred to the printing material, which is partly coated with glue. The part of the foil that was not transferred is wound up with the base foil.

New design dimensions through high resolution

The high resolution ranging from type matter to extremely fine details of design opens up new design dimensions in cold foil transfer: the classic hot stamping process provides only a low resolution of detail that is system-inherent in the relief form it requires. Besides, processes of hot foil stamping are mostly carried out offline in a separate machine, entailing longer throughput time and additional make-ready time. In contrast to the inline process in cold foil transfer, the result in the offline process of hot foil stamping is less accurate in register, whereas using the MAN Roland InlineFoiler – i.e. an integrated process – leads to a register accuracy that corresponds to the accuracy in offset.

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In prepress with both standard and bespoke hard and software solutions from DTP to high-end systems Dynagraph deals with manufacturers such as Fuji Film Graphic Arts or DuPont.

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The most important advantages: overprint ability and cost saving

Many users are not aware of one of the most important advantages of cold foil transfer over the offline processes of hot foil stamping: after transfer, the foil adheres flat to the printing substrate (which is not the case in hot foil stamping) and can be easily overprinted immediately after. Combining the cold foil transfer process and subsequent overprinting allows many new possibilities of design. With all that, this process is even more economical in the costs of procurement and storage – two advantages combined which are particularly important in view of the fierce competition in the printing business.

InlineFoiler reduces storage and rest stock

Generally, a foil for classic hot foil stamping consists of a base material which in most cases carries two layers of transfer material: the first layer consists of silver-coloured aluminium vacuum-metallised onto the base foil; the second is a – mostly coloured – coating on the aluminium. For hot foil stamping this means that the user needs to order a roll of specific stamping foil for every new hue of colour required. In other words, this process involves a high volume of stock, unneeded rest rolls and long delivery times, as well as the resultant higher costs.

Any desired hues of colour plus a new dimension of effect

A user of the MAN Roland InlineFoiler can calculate in a totally different way. The possibility of overprinting enables to use virtually every desired colour hue, and there are no limits to creativity in design. The designer no longer has to adapt his ideas to available hues; he can even have complete images printed on the foil components. The hot foil user has no access to this effect dimension, because in the process of hot foil stamping the existing embossed structure hardly allows overprinting of the foils – there, this is normally done in an additional printing process. While an offline cold foil transfer system does allow subsequent overprinting, it always necessitates a second pass, tying up extra personnel resources in addition. For the user of the MAN Roland InlineFoiler, the calculation is a radically different one: foil application and subsequent overprinting can be done in one pass with printing, additional manpower is not required.

Advantage in logistics due to use of silver transfer foil

Another positive side effect of foil overprint ability lies in better logistics and the higher flexibility in the printing process, because actually it is also possible to work with only one single silver transfer foil. Overprinting the silver with yellow and magenta components produces a warm gold tone, overprinting it with cyan makes it a metallic blue. This simplifies the ordering processes for the user, he reduces his storage and rest stock and can act much faster and more flexibly in producing his printing jobs – and save considerably in cost of logistics.

Overprinting substantially improves adhesion of the transfer foil

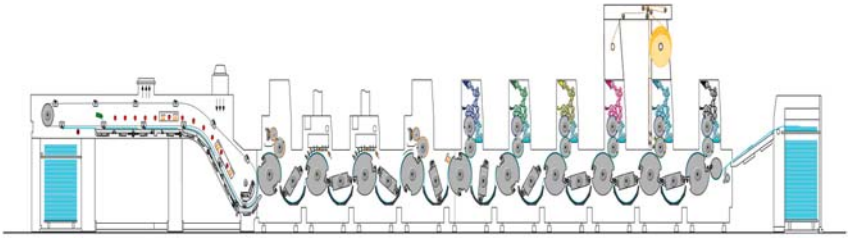
Overprint ability of the foils furthermore offers the possibility of playing with various metallic effects – for example as a pattern of gold and silver squares. But it is not only these effects that offer great potential for innovative users: subsequent overprinting also improves the adhesion of the cold-transfer foil to the printing substrate. Conventional, UV or hybrid inks can be used for overprinting. Conventional ink films, however, have to be coated in any case because of the slightly delayed drying of the ink films on the transfer foil. MAN Roland has obtained exclusive patent rights for this economically and technically advantageous combination process of inline foil transfer and subsequent overprinting.

Cold foil transfer with third dimension in the process of being developed

Many users of hot foil stamping miss the third dimension in the cold foil transfer process – but this will be remedied soon: MAN Roland is currently engaged in developing, with partners from the supplying industry, an embossing process that will enable rich-detail embossing of the cold foil transfer print. The process is still being developed but it already shows a high potential regarding make-ready optimization and quality. This process will enable MAN Roland press users to add anew, third dimension to the plane foil on the printed sheet, in that the foil is given an embossed structure. For all users it is important to know that MAN Roland has early in advance applied for a patent on this combination process of "Cold foil transfer and 3D embossing in one", which is about to be granted: users and customers of MAN Roland presses thus already enjoy an exclusive advantage over their competitors.

Pioneers of industrial cold foil transfer

MAN Roland is permanently working on further optimization of the process in cold foil transfer and its possible applications. Besides the mentioned patents and patent applications concerning 3D embossing, six additional new patents have been published which have to do with advanced developments of the device and with applications for the cold foil transfer process: these are currently unique in combination, efficiency and operating cost saving. By investing in the MAN Roland InlineFoiler, therefore, the user can be sure of maximum investment security and a lastingly high level of innovation.



The InlineFoiler from MAN Roland, the pioneer of industrial cold foil transfer

Ref. MAN Roland Druckmaschinen AG