

With more than 50 installations worldwide, lithographic cold foil application is beginning to be understood and is starting to capture the imagination of designers and cartonmakers as they begin to see new emerging markets and the potential of the process. The result is a wider range of foils becoming available together with better adhesives, better inks and coatings — all developed with cold foil in mind. This has allowed this sector of the market to become more mature with

repeatable results achieved across a wide range of foiled products.

A specific drawback to cold foil application is the amount of foil used per job and the method of application in terms of both the equipment used and designs of the foil paths. Currently, only single rolls of foil can be run on one foil shaft, meaning in practice that more foil has to be run across the width of the press than is necessary for the job. Also, the dancing roll arrangement that controls the foil tension on first generation equipment necessitates that the foil runs “live side” around the dancing roll which can cause damage to the foil resulting in, amongst other things, foil cracking, pin holing and ink contamination.

HOT AND COLD FOIL APPLICATION MOVES TO NEXT GENERATION



L to R: Mike King and John Hopkinson



NEW MARKETS WHICH HAVE BEEN OPENED BY COLD FOIL APPLICATION ARE ALSO STARTING TO DIFFERENTIATE BETWEEN IT AND THE HOT FOIL MARKET

Hot and Cold

New markets which have been opened by cold foil application are also starting to differentiate between it and the hot foil market — to the point where the two systems can be viewed as more complimentary than competitive. There will also be an area of overlap, so the best option for many applications is to consider both hot and cold applications.

To achieve this, Scienta Ltd of the UK and Graphic Art System of the US, manufacturer of the Eagle System, have teamed up to produce the latest generation of both styles of equipment. The Scienta Foilflow system is designed to allow multiple rolls of foil to be used across the press, using only a single shaft for unwind and a single shaft for rewind. This allows foil to be correctly positioned across the machine in those areas where foil is to be applied with a minimum foil width of 80mm. The control system is achieved by bespoke software allowing an automatic balance between the servo drive and the air pressure which controls the shafts. This allows first generation swing arms to be eliminated and produces a foil path where the “live side” of the foil does not touch any shafts prior to

lamination to the sheet and therefore remains undamaged.

John Hopkinson from Scienta explains, “While it is still not possible to index the foil, the Foilflow system does ensure the foil is only applied to the printed sheet and is “arrested” at all other times when the press may be running but sheets are not passing through. When sheets again start to be fed, the Foilflow system re-engages to run normally. The operation is totally automatic without operator intervention. The whole system can achieve foil savings of up to 60 percent when judged against first generation equipment — while producing a better lamination of foil to the substrate.” The new cold foils now coming forward allow for excellent adhesion to the substrate and superb overprinting for either conventional or UV inks.

Eagle System

Foil indexing in a hot system is fairly well understood. Foil is indexed from one shaft to another. However, to do this with accuracy and at high speed, the foil needs to be driven off the roll — not

simply pulled from it as in some previous generation systems. The Eagle System drive indexes individual rolls and drives the foil from the roll with precise servo control for each index. Foil tension is maintained against a servo controlled take up roller. With this system a wide range of foil indexes can be run on the same job without problem at high speed and with precise registration.

The principal advantage of the Scienta Foilflow and the Eagle System is low cost of both equipment and process. Both systems are designed to be retrofitted to existing equipment — the printing press for Foilflow and the automatic die cutter for the Eagle. Both also have the advantage of not detracting from the host machine’s original functionality. When not foiling with Foilflow, the print units revert to printing without any mechanical alteration. The new Eagle units can be installed or removed from the host diecutter within 30 minutes. Both systems allow for maximum flexibility, top product quality and all at minimum cost.

Mike King from Eagle added, “The combination of Scienta and Eagle allows us to recommend to our customers the best solution for their individual needs while we are also able to honestly explain the advantages and drawbacks to each system and which will be the more profitable solution for specific applications.”

Further information can be found at www.Scienta.co.uk www.graphicartsystem.com

