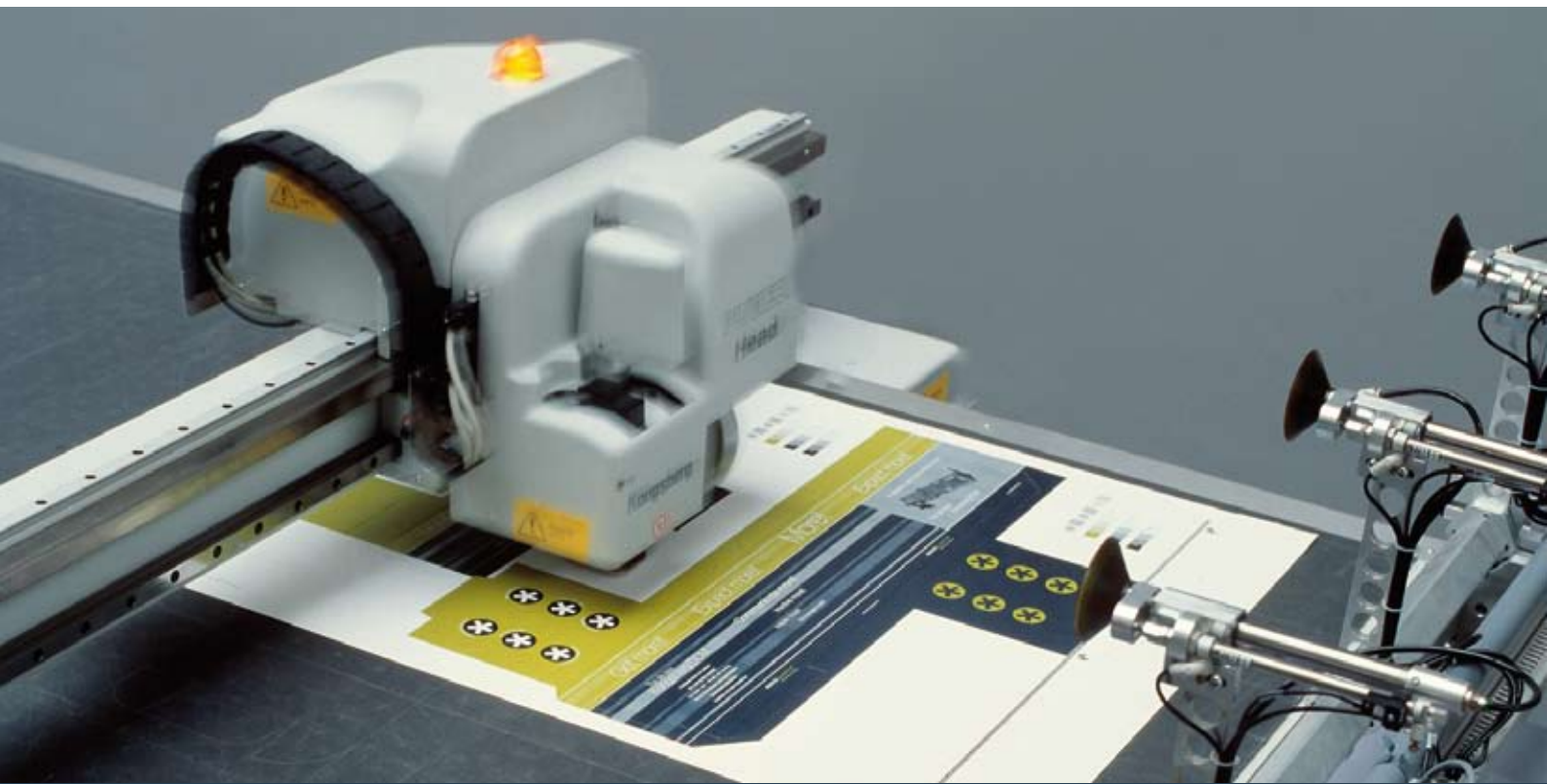


Short-run production of packaging and POP displays

The Kongsberg Digital Converting Machine



Kongsberg DCM: profitable small-lot production of packaging and point-of-purchase displays

The Kongsberg Digital Converting Machine can automatically load and unload boards and cuts and creases them directly from CAD files, without the need of a cutting die. It is ideally suited for profitable, just-in-time short-runs, up to around 400 items. No matter if you use silk-screen prints, digital prints or flexographic prints, the DCM cuts and creases any corrugated sheet in register.

By eliminating the out-of-pocket expense and time associated with manufacturing a cutting die, the DCM can turn the challenge of short-run and special request converting into a catalyst for new business growth and increased revenues. Thanks to the automatic loading/unloading no operator is needed to feed the machine with corrugated sheets one by one.

The DCM is equipped with a full package of productivity features that offer the right combination of speed and flexibility for fast turnarounds — and higher margins — on low-volume runs of in-store displays, dimensional promotions, and a wide variety of custom packaging and prototyping applications.

The Digital Converting Machine is built on the proven technology of the well-known Kongsberg line of electronic sample tables. Since 1985, Esko-Graphics has installed over 2000 Kongsberg tables in more than 75 countries around the globe. All but a handful are still in active use today. This remarkable track record, backed by the Esko service and support organization, is your guarantee that the DCM digital converting machine will be a valuable asset for many years to come.



Unmatched reliability and a rapid return on your investment with the Esko Kongsberg DCM.

Growth opportunities

- With the DCM you can accept small-run orders which may secure high volume business from companies that prefer one-stop shopping giving you total control of the business.
- The simple workflow makes the DCM an inexpensive entry ticket for operations without prior manufacturing infrastructure.
- The recent trend towards digital short-run printing demands a method for digital finishing: the DCM is the ideal complement to the large format digital flatbed printers.

Cost reduction

- Since the DCM does not need a cutting die a fast return on investment can be achieved just from the die cost savings. In addition you benefit from the cut down on die storage space requirements.
- Using the DCM for small-lot production leaves high-cost and high-capacity equipment undisturbed.
- Low requirements for operator intervention also results in reduced labor cost.



Short delivery time

The DCM enables tighter deadlines for test marketing jobs, product launches and promotional events by

- eliminating the waiting time for a cutting die
- low intervention requirements enabling unsupervised overnight jobs
- special software functions ensuring maximum efficiency
- easy to make last minute adjustments during the process

Versatility

To address the ever-expanding spectrum of packaging materials and designs, the DCM can fully duplicate any CAD generated design, including complex perforations, zipper locks, arcs, circles, etc. The DCM accommodates an entire family of quick-change creasing, cutting, crushing, and special purpose knife tool inserts.

The standard tool package includes the PowerHead for heavy-duty materials, ensuring superior performance in single, double and triple wall corrugated board. A DCM with PowerHead also gives the opportunity for v-notch cutting.

Kongsberg DCM

Toolhead for cutting and creasing of a wide spectrum of designs and materials.



The **fully automatic load mechanism** can handle up to a half ton of corrugated material. There is no need for an operator to load and unload material piece by piece, hence saving labor costs and idle time. When fetching sheets from the in-stack they are carefully lifted to avoid friction and scratches.



Powerful **vacuum suction** for firm and dependable material hold-down. Sensors ensure that the board processing will not be allowed to proceed if the hold-down is insufficient.



Load frame that simultaneously loads a fresh sheet from the in-stack and moves the finished sheet to the out-stack.

In the **integrated out-stack** finished boards are neatly stacked on a pallet, simplifying subsequent stripping. The out-stack offers pallet jack access while the machine continues to work.

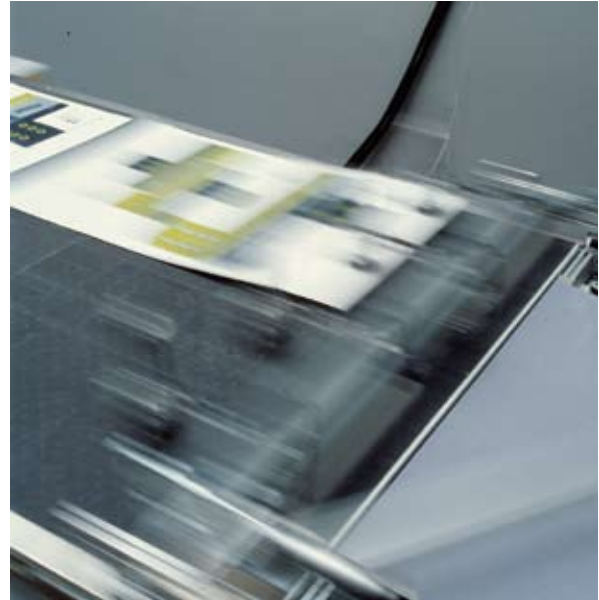
Shop floor safety has been thoughtfully engineered into every aspect of the DCM. Housed within a gated, access-controlled area, the DCM complies with all international safety regulations. Operations are automatically disabled when the main gate is opened, and visible warning lights continually alert nearby production personnel to the machine's running status.

Ergonomic **operator control station**: the operator can oversee the entire job run from a specially designed workstation that houses a simple instruction keypad and a Windows-based PC. An **intuitive graphical interface** and an extensive Online Help system makes it especially easy for the operator to prepare the work for the DCM.

Efficient production

To help maximize output and minimize waste from each sheet, the Esko Kongsberg DCM features sophisticated and highly flexible functions such as:

- **Automatic tool identification** by reading individual bar codes on each tool.
- **Automatic knife tip sensor.** After each sheet has been completed the knife tool drops down on a measuring pad that checks that the knife blade is intact. The check only takes a couple of seconds.
- **Job queue function** that makes it possible to work continuously on consecutive jobs in a queue.
- **Optical registration of print-to-cut** (optional) saves setup time and reduces significantly the amount of extra printed sheets required for ensuring perfect print-to-cut registration.
- **Multiple design** gives you the opportunity to cut several different designs on non-printed sheets.
- **Cad-X** makes it possible to open files from ArtiosCAD directly into the DCM guide.



Valuable options

Optical registration feature. A camera based system for automatic print-to-cut registration takes the DCM to yet another level of efficiency and dependability, enabling further cost savings for the customer. Some of the benefits are:

- Time saving in job setup.
- Cost/time saving by not having to print the extra sheets to ensure registration.
- More accurate cut-outs.
- Better flexibility for post-laminated sheets.

Remote alert system. This system sends text messages to the operator's mobile phone during unsupervised operation. It also allows you to call the machine for a status of the currently running job.

Manual load function. By deactivating the automatic load/unload system it is possible to operate the DCM as a manually loaded cutting table for one-off items such as samples.



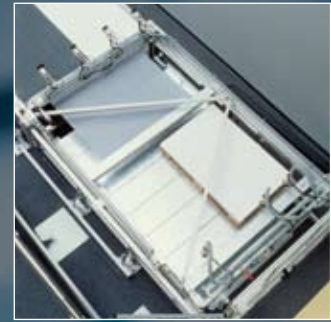
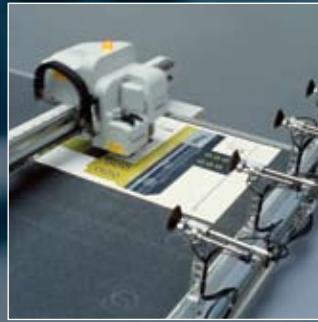
Foam cutting. The FoamHead option enables the DCM to cut foam material up to 75mm - 3" in thickness. Manual handling of the material is required when using the FoamHead.

Technical specifications

	DCM 24
Working area with PowerHead (all 3 tools)	1630 x 3200 mm 64.1" x 126"
Max. sheet size	1700 x 3200 mm 67" x 126"
Overall dimensions	3265 x 9810 mm 10' 8" x 32' 2"
Total weight	1300 kg 2900 lbs
Position accuracy (total work area, standard material clearance)	±200µm ±.0078"
Repeatability	±50µ ±.0019"
Maximum speed	50 m/min - 33 ips
Maximum acceleration	5.6 m/s ² - 0.56 G
Material clearance	87 mm - 3,42" (without cutting underlay)
Vertical tool force	Standard tool stations: 220 N PowerHead crease station: 500 N
Cutting underlay	Hard-pressed felt mat for optimal material hold-down and knife protection
In-stack capacity	600mm – 24" stack height
Sheet loading time	12 sec.

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