

High-speed precision digital cutting table for labels, signs and displays

The Kongsberg *i*-XE10



Kongsberg *i*-XE10

unmatched performance and versatility

The Kongsberg *i*-XE10 is Esko's completely new, smaller format platform, designed to provide a powerful and versatile finishing solution for short-run production of labels, signs and displays, and small packaging.

Building upon its experience and expertise with the Kongsberg *i*-XL large format digital finishing systems for rigid materials, Esko has incorporated a number of features from the architecture of its widely popular digital cutting and creasing tables. With the Kongsberg *i*-XE10, users can expect a digital finishing solution for small format, lightweight and flexible materials that outperforms other solutions in both productivity and precision.

Assisted by a rack-and-pinion X/Y drive with precise motion control, an innovative, fast servo system and completely new tool set, the *i*-XE10 combines high production speed and accurate precision with easy operation.



The Kongsberg i-XE10, featuring the successful integration of proven MGE i-cut® technology, complements digital and other printed sign and display materials with a unique finishing solution - providing automation, high productivity and outstanding precision.



There is a need for a speedy and versatile solution for short-run finishing of smaller sized decals and labels, signs and displays, boxes, cards, overlays, and more.



No manual cutting or expensive dies are needed: production runs from one to several thousand can be quickly generated with professional precision.



In their quest to create displays that stand out in a crowd, designers build special graphics and shapes that are manufactured on a wide range of materials.

Tooling system

The Kongsberg *i*-XE10 features an entirely new tooling system with a variety of tool stations, designed for lightning-fast motion combined with superb accuracy to increase finishing productivity and quality for a wide range of materials.

The tooling system offers two configurable tool positions with quick connectors prepared for a range of advanced tool stations and a fixed tool position for a multifunctional unit.



*With the *i*-XE10, lightweight and flexible materials such as vinyl, polyester, polypropylene, polycarbonates, and cartons up to single flute corrugated board can be cut and creased with exceptional cost savings.*

Tooling stations

PressCut tool

A pressure-controlled cutting tool with an internal motor for fast response and accurate tool pressure. Tool pressure can vary between paths in the finishing of the job allowing kiss- and through-cutting within the same job. Software provides speed-dependent pressure control, important to ensure reliable cutting when velocity ramps up and down. The maximum downward knife pressure is 10N and maximum tool lift is 4mm.

VariCut tool

With the help of servo-controlled cutting depths, the VariCut tool can conduct partial micro-cutting with fine depth tolerances as well as through-cutting – different depths can be defined for different lines within the same job. The tool is equipped with a base that hovers above the material, providing a reference check for cutting depth. The maximum cutting depth is 3mm and maximum downward knife pressure is 10N.

Static knife tool

The static knife tool can cut through thin, rigid material such as carton board and polypropylene. Different knife blade adapters are available.

Crease tool

Along with the 15 and 26mm wheels, it is easy to crease folding carton and corrugated board. The Kongsberg *i*-XE10 offers a maximum vertical tool force of 20 kg, which means that even the most rigid boxboard materials can be sufficiently creased.

VibraCut tool

Suitable for single-flute corrugated board up to and including C-flute and other lightweight fibrous materials of similar thickness. An internal motor drives knife oscillation. Different knife adapters accommodate different knife types. The tool features a removable weighted foot that provides additional pressure on the material, assuring a clean cut on boards with high recycle content.

Multifunctional unit

A versatile tool, providing a Measuring Probe to calculate material thickness and table-top contour mapping, a Ballpoint Pen, and a Laser Pointer. The Multifunctional unit is required with all tools other than the PressCut tool. The Multifunctional unit is required with all tools other than the PressCut tool.

i-cut[®] vision: perfect registration

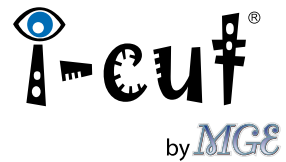
With the *i*-XE10 you can cut custom shapes right on the finishing table with exact registration between graphics and finishing.

The *i*-cut[®] vision system works with strategically placed registration marks – alignment dots – that are printed along with the graphics and are used to align the cutting path. The *i*-cut[®] camera optically locates and analyzes the registration marks, and automatically and dynamically compensates for any dimensional changes, distortions or material variations – like shrinking or stretching. Along with the *i*-cut[®] software, the *i*-cut[®] vision system is a fail-safe, patented and proven registration method that guarantees perfect cut-to-print.

i-script[™]: finishing workflow

The *i*-script protocol allows interfacing between printing and cutting components to share critical data. Job data such as cutting design, scale, rotation and layout of different designs and registration marks can be passed directly from the printing control RIP workstation to the Kongsberg *i*-XE10.

The *i*-script[™] workflow dramatically improves productivity, finishing a complete sheet or roll of material with virtually no set-up time.



The Kongsberg i-XE10 is a complete digital solution, taking finishing instructions from computer-based CAD files. The finishing file not only contains the structure and shape, but also specific tool parameters such as pressure and depth controls for partial or through-cutting, creasing and oscillated cutting.

Automated material handling

Conveyer system

The Kongsberg *i*-XE10 can be equipped with a conveyer system for automated material processing.

Very simply, a continuous conveyer belt surrounds the table and moves over the table surface. Material follows the belt along the table, held down by pneumatic supports. Production applications requiring uninterrupted loading of material are made possible with *i*-cut's continuous workflow operation.

Material can be constantly retrieved from a roll, or sheets can be automatically fed through a sheet feeding system.



Sheet feeding system

The MGE sheet feeding system features a 'Pick & Place' unit along with a loading table, on which sheets are stacked for finishing. Sheets are picked up one-by-one with suction cups and placed on the Kongsberg *i*-XE10 conveyer belt for transfer onto the finishing table. The finished material is then collected from the belt and placed on an off-load table, or moved to a conveyer extension table for manual unloading.



Technical specifications

Work area	31" x 43" 800 mm x 1100 mm
Maximum sheet size	35" x 47" 900 mm x 1200 mm
Maximum speed ⁽¹⁾	52.5 IPS 80 m/min
Maximum acceleration ⁽¹⁾	12 m/sec ² 1.2G
Overall dimensions (LxW) table only	64.2" x 62.3" 1630 mm x 1580 mm
Overall dimensions (LxW) table and operator console	64.2" x 90.4" 1630 mm x 2295 mm
Weight	385 lbs 175 kg
Servo resolution	< .00024" < 0.006 mm
Repeatability	± .00078" ± 0.002 mm
Addressable increment size	.00004" 0.001mm
Maximum horizontal cutting power, any direction	18.4 kg force – 180N 40.5 lbs force
Maximum vertical tool power	20.4 kg force - 200N 45 lbs force
Traverse clearance ⁽²⁾	.787" 20 mm
Operator console	Mounted on the side of the table, includes a table operator panel, main switch, emergency power switch and storage space for tooling. Can hold a controller PC with a flat-screen monitor, keyboard and mouse ⁽³⁾
Control software	<i>i-cut</i> [®] vision pro including <i>i-script</i> [™] XE-Guide
Operator safety	Included is the DynaGuard Safety System protecting operator and bystanders from potential machine hazards.
Automation features options ⁽⁴⁾	Conveyer system with a conveyer belt around the cutting table
	Conveyer extension with a conveyer belt around the cutting and extension table, adding 43" / 1100 mm passive area to the work area
	Roll material holder
	Sheet material loading and unloading equipment

(1) Measured along the resultant of the X and Y-axis velocity vectors.

(2) Measured without hard-pressed felt cutting underlay.

(3) Controller PC is optional.

(4) All are field upgradeable.



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