Kongsberg Tabels

Technical data

ESKO artwork

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Kongsberg XE Series

Dieless digital cutting and creasing tables for folding carton packaging.

The Kongsberg XE is a small format system with robust construction and performance. It is the ideal solution for high quality sample making and short run production of folding cartons and for the preparation of varnish blankets.

Specifications for all XE tables

Operator safety

- The DynaGuard Safety System protects the operator and bystanders from potential machine hazards. In addition the machine is equipped with an emergency stop button and a warning light, which is lit as long as the servos are powered.

Control software

- XE Guide

Notes

		XE Series	
		XE10	**XE32**
Work area	mm In.	800 x 1100 31.5 x 43.3	1300 x 1620 51 3/16 x 63 3/4
Maximum sheet size	mm In.	900 x 1200 35.4 x 47.2	1400 x 1720 55 x 68
Overall dimensions (LxW)	mm In.	1630 x 1580 64.2 x 62.3	2000 x 2300 79 x 91
Weight	kg lbs	175 385	450 990
Maximum speed(1)		64 m/min - 42 IPS	
Maximum acceleration(1)		12 m/s2 - 1.2G	
Servo resolution		< 0.005 mm - < .0002”	
Repeatability		± 20 µm - ± .00078”	
Addressable increment size		0.001 mm .00004”	
Maximum horizontal cutting force		200N – 45 lbs force	
Maximum vertical toolforce		100N – 25 lbs force	
Traverse clearance(2)		20 mm - .787”	

(1) Maximum speed and acceleration measured along the resultant of the X and Y-axis velocity vectors.
(2) Measured without cutting underlay.

Kongsberg XP Series

High Performance digital cutting tables for short-run productivity

The Kongsberg XP series of digital cutting tables handle the combination of corrugated board and other rigid materials used for packaging, POP and product displays. They are specifically designed to operate continuously at high speed in a 24/7 production environment.

Specifications for all XP tables

Features

- Automatic tool level measurement.
- Operator workstation can be turned 90° to simplify setup and operation.
- Automatic material handling options can be retrofitted.

Available tool options

- Reciprocating knife tools
- Static knife tools
- HeavyDuty tool module, with inserts for crease wheels, v-notch knives and vertical HD knives
- High-Power, High-Speed milling tool
- Drill tool
- Pen plotting tools
- Foam cutting unit
- Textile cutting tool
- Kiss-cutting tool for adhesive vinyl

		XP Series		
		XP20	**XP24**	**XP44**
Work area	mm in.	1680 x 1430 66 x 56	1680 x 3200 66 x 126	2210 x 3200 87 x 126
Max. material size	mm in.	1780 x 1800 70 x 71	1780 x 3600 70 x 141	2310 x 3600 91 x 135
Overall dimensions	mm in.	3600 x 2100 142 x 82.7	3600 x 3900 142 x 154	4100 x 3900 161 x 154
Weight	kg lbs	450 990	600 1325	800 1760
Maximum speed		100 m/min - 66 IPS		
Maximum acceleration		15m/s^2 1.5G		14m/s^2 1.4G
Position accuracy (total work area)		±200 µm ±.0078”		±300 µm ±.0118”
Repeatability		±50 µm ±.0019”		±60 µm ±.0023”
Vertical tool force		Standard tool modules: 220 N HeavyDuty tool module: 500 N		
Standard vacuum sectioning		1 zone	2 zones	2 zones
Optional vacuum sectioning		4 zones	8 zones	8 zones

Notes

Kongsberg XL Series

Samplemaking and short-run production tables

These die-less cutting and creasing tables simplify the production of low volumes and samples. They deliver record-breaking produtivity and versatility.

Specifications for all XL tables

Vertical tool force

- Standard tool stations: 220 N.
  PowerHead crease station: 500 N

Material registration brackets

- Included. Enables cut, crease and plot operations on both sides of the material. The brackets are positioned at the front and rear right corner of the machine

Operator safety

- The DynaGuard Safety System protects the operator and bystanders from potential machine hazards. In addition the machine is equipped with an emergency stop button and a warning light, which is lit as long as the servos are powered.

		XL20 Series			XL40 Series			
		XL20	**XL22**	**XL24 (M)**	**XL42**	**XL44**	**XL46**	**XL48**
Work area	mm In.	1680 x 1270 66 x 50	1680 x 2190 66 x 86	1680 x 3050 66 x 120	2210 x 1270 87 x 50	2210 x 3050 87 x 120	2210 x 4800 87 x 189	2210 x 6550 87 x 258
PowerHead (all 3 tools)	mm In.	1618 x 1270 63.7 x 50	1618 x 2190 63.7 x 86	1618 x 3050 63.7 x 120	2148 x 1270 84.6 x 50	2148 x 3050 84.6 x 120	2148 x 4800 84.6 x 189	2148 x 6550 84.6 x 258
Max. sheet size	mm In.	1750 x 1620 69 x 64	1750 x 2580 69 x 102	1750 x 3420 69 x 135	2280 x 1680 90 x 66	2280 x 3420 90 x 135	2280 x 5190 90 x 205	2280 x 6960` 90 x 275
Overall dimensions[1]	mm In.	2250 x 1980 89 x 78	2250 x 2860 89 x 113	2250 x 3720 89 x 146	2780 x 1956 109 x 77	2780 x 3730 109 x 147	2780 x 5500 109 x 217	2780 x 7270 109 x 263
Weight	kg lbs	405 890	475 1045	580 1276	440 968	765 1683	1100 2420	1435 3157
Maximum speed		50 m/min - 33 IPS			50 m/min - 33 IPS			
Maximum acceleration[3]		5.6 m/s² - 0.56G			5.4 m/s² - 0.54G			
Position accuracy [2]		± 200 µm ± .0078”			± 250 µm ± .0098”	± 300 µm ± .178”	± 350 µm ± .014”	± 400 µm ± .014”
Repeatability		± 50 µm - ± .0019”			± 60 µm - ± .0023”			
Field upgradeable to		XL24 (M)	-	-	XL44, XL46	XL46	XL48	-
Standard material clearance [4]		30 mm - 1 3/16”			50 mm - 2”			
Optional material clearance [4]		50 mm - 2” or 95 mm – 3 ¾”			95 mm – 3 ¾”			

(1) Safety system may add to overall dimensions.
(2) Applies across total work area, with standard material clearance.
(3) May be less with certain tool- and configuration combinations.
(4) Measured without cutting underlay

Kongsberg DCM

Short-run production of packaging and POP displays

The Kongsberg DCM perfectly fits in a completely digital workflow and is ideal for profitable, just in-time short runs of packaging and POP displays.

Notes

	DCM 24
Working area with PowerHead (all 3 tools)	1630 mm x 3200 mm 64.1” x 126”
Maximum sheet size	1700 mm x 3200 mm 67” x 126”
Overall dimensions	3265 mm x 9810 mm 10’ 8” x 32’ 2”
Total weight	1300 kg - 2900 lbs
Position accuracy	±200 µm - ±.0078”
Repeatability	±50 µm - ±.0019”
Maximum speed	50 m/min - 33 ips
Maximum acceleration	5.6 m/s2 - 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	600 mm – 24” stack height
Sheet loading time	12 sec

Kongsberg *i*-XE 10

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

The Kongsberg *i*-XE tables process rigid and flexible display materials. They provide an efficient and versatile finishing solution for short-run production of labels, signs and displays, visual communication items or various digital print items.

Specifications

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 con.troller PC (optional) with a flat-screen monitor, keyboard and mouse

Control software: *i*-cut® vision PRO

Operator safety: Included is the DynaGuard Safety System protecting operator and bystanders from potential machine hazards.

Optional automation features (field upgradeble)

- Conveyer system with a conveyer belt around the cutting table
- Conveyer extension with a conveyer belt around the cutting and extension table, adding passive area to provide safe space for handling finished items. Extension lengths *i*-XE10: 1100 mm - 43”
- Roll material holder
- Sheet material loading and unloading equipment

		i-XE 10
Work area	mm in.	800 x 1100 31 x 43
Maximum sheet size	mm in.	900 x 1200 35 x 47
Overall dimensions (LxW) table only	mm in.	1630 x 1580 64 x 62.5
Overall dimensions (LxW) table & operator console	mm in.	1630 x 2295 64 x 90.5
Weight	kg lbs	175 385
Maximum speed (1)		52.5 IPS 80 m/min
Maximum acceleration (1)		12 m/sec^2 1.2G
Servo resolution		< 0.006 mm - < .00024”
Repeatability		± 0.002 mm - ± .00078”
Addressable increment size		0.001 mm - .00004”
Max. horizontal cutting power, any direction		18.4 kg force – 180 N 40.5 lbs force
Max. vertical tool power		12 kg force - 120N - 26.5 lbs force
Traverse clearance (2)		20 mm - .787”

(1) Measured along the resultant of the X and Y-axis -velocity vectors.
(2) Measured without hard-pressed felt cutting underlay.

Kongsberg *i*-XL Series

Automated digital finishing systems for signs and displays.

The Kongsberg *i*-XL complements digital printing of sign and displays with a unique finishing solution for the widest range of materials and applications, providing automation, high productivity and outstanding precision.

Notes

Specifications for all *i*-XL tables

FlexiHead-*i*

- Three configurable tool stations + *i*-cut camera

MultiCUT-*i* head

- Two configurable tool stations + *i*-cut camera + router

Material clearance

- 50 mm - 2” (without cutting underlay)

Max. tool force

- 22 kg - 48lbs

Registration and compensation

- *i*-cut© vision PRO

Workflow

- *i*-script™

Workstation

- Custom operator console attached to i-XL frame with integrated PC workstation, screen, keyboard and operator panel

Automation features

- Conveyor system with roll and sheet/board material loading & unloading equipment

		i-XL Series			
		***i*-XL20**	***i*-XL24**	***i*-XL42**	***i*-XL44**
Working area* with FlexiHead (W x L)	mm In.	1610 x 1270 63 3/8 x 50	1610 x 3050 63 3/8 x 120	2140 x 1270 84 1/4 x 50	2140 x 3050 84 1/4 x 120
Working area* with MultiCUT – tool stations	mm In.	1618 x 1270 63.7 x 50	1618 x 3050 63.7 x 120	2148 x 1270 84.6 x 50	2148 x 3050 84.6 x 120
Working area* with MultiCUT - router table only	mm In.	1680 x 1270 66 x 50	1680 x 3050 66 x 120	2210 x 1270 87 x 50	2210 x 3050 87 x 120
Overall dimensions including console	mm In.	2250 x 1980 89 x 78	2250 x 3720 89 x 146	2780 x 1990 109 x 78	2780 x 3730 109 x 147
Max. material size	mm In.	1750 x 1620 69 x 64	1750 x 3420 69 x 135	2280 x 1620 90 x 64	2280 x 3420 90 x 135
Weight	kg lbs	405 890	580 1276	440 970	765 1683
Position accuracy		± 200 µm ±.0078”	± 200 µm ±.0078”	± 300 µm ±.0118”	± 300 µm ±.0118”
Repeatability		± 50 µm ±.0019”		± 60µm ±.0023”	
Maximum speed		50m/min - 33ips		50m/min - 33ips	
Maximum acceleration		5.6m/s² - 0.56G		5.4m/s² - 0.54G	

Toolheads

FlexiHead

The FlexiHead is widely **used for folding carton and corrugated board.** It combines highly accurate cutting with power and robustness even for the most complex and compact materials.

Like all other XL toolheads the FlexiHead is mounted on a servo controlled Z-axis plane that moves the entire head up and down to precisely control cutting and creasing depth.

The three configurable tool stations accommodate the full range of standard XL tool inserts. The center toolstation has a spring loaded material foot that serves two purposes:

- It provides hold-down of the material and prevents the knife blade from pulling up pieces of material when extracted
- The foot has an integral sensor that allows exact measurement of the material thickness.

PowerHead (standard for the DCM)

This toolhead comes with two regular tool positions, which means that all standard XL tool inserts can be used.

In addition the PowerHead features a heavy-duty position that can take a large-size crease wheel (diameter 150mm [6"]). This crease wheel has the equivalent of 50kg [110lb.] of down-pressure, or 2½ times more force than the conventional tool stations. The combination of additional down-force and the large fronal area of the big wheel offers

excellent crease quality in **heavy-duty corrugated board** and enables creasing **boards with high recycle content** without breaking the liner.

The PowerHead can be expanded to **V-notch cutting** by exchanging the crease wheel with a knife adapter. V-notch cutting offers mitred corners and highly exact folds for specialty products, such as loading pallets and cushioning elements for shipping containers, as well as special-purpose displays.

Flexihead-M

The FlexiHead-M is a variant of the standard FlexiHead, offering a **milling tool** in addition to the three standard tool positions.

The primary application for the FlexiHead-M is **folding carton sample-making** for customers wanting to make the crease matrix out of wooden fiberboard. The main advantages with milled matrices are:

- Generally better crease quality than when cutting the matrices out of carton board.
- Time savings; no manual finishing of the matrices is required. With knife cut matrices the matrice tracks must be manually peeled before the sample can be made
- Longer matrix lifetime: a milled matrix will always last for the duration of the sample run, even for very large runs, a paper-based matrix will typically last for 5-8 repetitions before crease quality starts to suffer.

The milling tool has a digital micrometer for fine-tuning of routing depth. FlexiHead-M has an automatic chip suction system, including a vacuum cleaner.
The entire range of standard XL tool inserts fits the FlexiHead-M.

MultiCUT

The MultiCUT comes with two conventional tool stations configurable with all the standard XL tool inserts, in addition to a high-power milling spindle capable of handling a wide range of rigid materials. The MultiCUT is unique because with one single toolhead the customer can process materials **from corrugated and folding carton to glass-hard sheets of thick Plexi-glass**.

- features air-cooling for the milling bit. A thin jet of air is continuously blowing at the bit and this cooling is important for the edge quality when milling acrylic and other synthetic materials at high speed.
- milling bit exchange is very fast and elegant thanks to a switch that opens / closes the collet holding the bit, eliminating all needs for hand tools.
- the MultiCUT can be fitted or retrofitted to all existing XL-tables.

FoamHead

The FoamHead is a separate toolhead that exchanges with the Flexi-Head or the PowerHead for switching between foam and paperboard materials. The FoamHead will handle **foam materials** with a maximum thickness of 86 mm [3 3/8”]. Using blades with serrated (wavy) edge the FoamHead is also utilized for **honeycomb paperboard**.

- partial throughcut thanks to the Z-axis control of the XL tables which is very important with many foam designs.
- typical cutting speed in various foam materials from 3 to 10 m/ min.

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