Kongsberg

Technical specifications

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Kongsberg XE10

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

- **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.
- **User interface / control system**: XE-Guide

Notes

	XE10
Work area	800 x 1100 mm 31.5” x 43.3”
Max. sheet size	1000 x 1500 mm 39.4” x 59.1”
Overall dimensions	1580 x 1630 mm 62.3” x 64.2”
Weight	175 kg - 385 lbs
Max. speed[1]	64 m/min - 42 IPS
Max. accelearation[1]	12 m/s² - 1.2 G
Servo resolution	< 0.005 mm - < .0002”
Repeatability	± 20 µm - ± .00078”
Max. horizontal cutting force	200 N - 45 lbs force
Max. vertical tool force	100 N - 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 V Series

Tables for one ups and short-run production.

The Kongsberg V entry level cutting tables offer durability, precision, and versatility.

Specifications for all V tables

- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards.
- **Tooling range**: the V series for Packaging comes with the FlexiHead tool head while the Kongsberg V for Sign & Display comes standard with the 1kW MultiCut head. All XN tool inserts that fit the FlexiHead and MultiCut insert positions are available, except the FoamKnife.
- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards.
- **Material registration brackets (optional)**: the brackets enable cut, crease and plot operations on both sides of the material. They are positioned at the front and rear right corner of the machine.
- **User interface / control system**: *i*-cut Production Console
- **X-Pad** for semi-automatic tool leveling (optional)

Notes

	V20	V24	
Kongsberg V for Packaging			
Work area	1680 x 1270 66 x 50	1680 x 3050 66 x 120	mm in.
Max. sheet size	1750 x 1620 69 x 64	1750 x 3420 69 x 135	mm in.
Kongsberg V for Sign & Display			
Work area	1618 x 1270 63.7 x 50	1618 x 3050 63.7 x 120	mm in.
Max. sheet size	1750 x 1620 69 x 64	1750 x 3420 69 x 135	mm in.
Overall dimensions	2400 x 1980 94 x 78	2400 x 3720 94 x 146	mm in.
Weight	405 890	580 1276	kg lbs
Max. speed	30 m/min - 20 IPS		
Max. acceleration	3.0 m/s² - 0.30 G		
Repeatability	± 50 µm - ± .0019”		
Position accuracy[1]	± 200 µm - ± .0078”		
Vertical tool force	220 N		
Standard traverse clearance[2]	50 mm / 2”		

[1] Applies across total work area

[2] Measured without cutting underlay. Max. cutting thickness is tool dependent.

Kongsberg XN Series

Highly versatile cutting tables for digital finishing

The Kongsberg XN series of digital cutting tables comes in seven different model sizes and can be configured to solve virtually any finishing task related to the packaging, display and sign segments.

Specifications for all XN tables

- Three Styling Kits available to fit needs for
  - Samplemaking
  - Pack Production
  - Sign Production

A styling kit is a pre-packaged set of user interface, cutting underlay, different cover variants and PC-table or workstation

- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards.
- **User interface / control system**: *i*-cut Production Console

Available options

- **X-Pad** for semi-automatic tool leveling (included with the MultiCUT-HP toolhead)
- **Solutions for registration and compensation**: a camera system registers the actual dimensions and positions on the printed result by reading any number of registration marks. Then, finishing is adapted to the shape of the graphics. (Included in the Sign Production style kit.)
- **Optional automation features**: conveyor system with roll and sheet material loading & unloading equipment.
- All optional features can be retrofitted.

Notes

	XN20	XN22	XN24	XN40	XN44	XN46	XN48	
Work area, all tools	1680 x 1270 66 x 50	1680 x 2190 66 x 86	1680 x 3200 66 x 126	2210 x 1270 87 x 50	2210 x 3200 87 x 126	2210 x 4800 87 x 189	2210 x 6550 87 x 258	mm in.
Max. material size	1740 x 1750 68 x 69	1740 x 2570 68 x 101	1740 x 3575 68 x 140	2270 x 1750 89 x 69	2270 x 3575 89 x 140	2270 x 5250 89 x 206	2270 x 6930 89 x 273	mm in.
Max. material width w. conveyor system	1680 66			2210 87			N/A	mm in.
Overall dimensions w. front panel	2780 x 2450 109½ x 96½	2780 x 3040 109½ x 119½	2780 x 4050 109½ x 159½	3300 x 2250 130 x 88½	3300 x 4050 130 x 159½	3300 x 5730 130 x 225½	3300 x 7410 130 x 291½	mm in.
Overall dimensions w. RWS [1/2]	3600 x 2160 141¾ x 85	3600 x 2950 141¾ x 116	3600 x 3960 141¾ x 156	4070 x 2160 160¼ x 85	4070 x 3960 160¼ x 156	4070 x 5640 160¼ x 222	4070 x 7320 160¼ x 288¼	mm in.
Weight	455 1000	525 1150	630 1390	490 1080	815 1800	1150 2540	1485 3270	kg lbs
Position accuracy [3]	± 200 µm ± .0078”			± 250 µm ± .0098”	± 300 µm ± .012”	± 350 µm ± .014”	± 400 µm ± .016”	
Repeatability	± 50 µm - ± .0019”			± 60 µm - ± .0023”				
Max. speed	50 m/min - 33 IPS							
Max. acceleration [4]	5.6 m/s² - 0.56 G			5.4 m/s² - 0.54 G				
Vertical tool force	Standard tool stations: 220N. PowerHead crease station: 500N							
Vacuum sections	2	2	4	2	4	4	4	
Traverse clearance [5]	50 mm - 2” or 95 mm - 3 ¾”			depending on Style Kit and model size				

[1] Measured with RWS in its standard position

[2] Conveyor feed option will add marginally to the length dimension

[3] Applies across total work area, with standard traverse clearance

[4] May be reduced with certain tool- and configuration combinations.

[5] Measured without cutting underlay. Maximum cutting thickness is tool dependant.

Kongsberg XP Series

High Performance cutting tables for digital finishing

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

Specifications for all XP tables

- **Revolving workstation** mounted on the side of the table. Includes table operator panel, main switch, emergency power switch and storage space for tooling. Space for controller PC (optional) with a flat-screen monitor, keyboard and mouse.
- **Automatic tool level measurement.**
- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards.
- **User interface / control system**: *i*-cut Production Console (from 01 April 2015)
- **Optional print registration and compensation**: a camera system registers the actual dimensions and positions on the printed result by reading any number of registration marks. Then, finishing is adapted to the shape of the graphics.
- **Optional automation features**: conveyor system with roll and sheet material loading & unloading equipment.
- All optional features can be retrofitted.

	XP20	XP24	XP44	
Work area	1680 x 1430 66 x 56	1680 x 3200 66 x 126	2210 x 3200 87 x 126	mm in.
Max. material size	1740 x 1900 68 x 75	1740 x 3700 68 x 145	2270 x 3700 89 x 145	mm in.
Max. material width w. conveyor system	1680 66		2210 87	mm in.
Overall dimensions [1]	3600 x 2100 142 x 83	3600 x 3900 142 x 154	4100 x 3900 161 x 154	mm in.
Weight	450 990	600 1325	800 1760	kg lbs
Max. speed	100 m/min - 66 IPS			
Max. acceleration	15 m/s2 1.5 G		14 m/s2 1.4 G	
Position accuracy (total work area)	± 200 µm ± .0078”		±300 µm ±.0118”	
Repeatability	± 50 µm - ± .0019”		±60 µm ±.0023”	
Vertical tool force	Standard tool modules: 220N. HeavyDuty tool module: 500N			
Standard vacuum sectioning	1 zone	2 zones	2 zones	
Optional vacuum sectioning	4 zones	8 zones	8 zones	

[1] including workstation

Kongsberg XP Auto

Fully automated and unsupervised production of POP displays and packaging

The Kongsberg XP Auto is a fully automated dieless finishing machine for packaging and point-of-purchase displays. It can automatically load, cut, unload and neatly stack up to 2.3 x 3.3 m large printed sheets of paperboards, foam board and many other materials.

Specifications for all XP Auto tables

- **Revolving workstation** mounted on the side of the table. Includes table operator panel, main switch, emergency power switch and storage space for tooling. Space for controller PC (optional) with a flat-screen monitor, keyboard and mouse.
- **Automatic tool level measurement**
- **Print registration system**: the Automatic Registration System (ARS) reads up to 4 printed register marks from underneath the sheet during the load cycle. Optionally, the machine can also be equipped with a camera reading register marks from print facing up.
- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards.
- **User Inteface / control system**: XP-Guide

Notes

	XP24A	XP44A	
Work area	1680 x 3200 66 x 126	2210 x 3200 87 x 126	mm in.
Max. sheet size	1700 x 3300 67 x 130	2230 x 3300 88 x 130	mm in.
Overall dimensions [1]	3600 x 11000 141 x 433	4200 x 11000 165 x 433	mm in.
Weight	2600 5730	2800 6170	kg lbs
Max. speed	100 m/min - 66 IPS		
Max. acceleration	15 m/s² 1.5 G	14 m/s² 1.4 G	
Vacuum pump (included)	7.5 kW		
Vacuum sections	8		
Traverse clearance (excl. cutting mat)	70 mm - 2.75”		
Standard stack capacity	0.6 m - 23½”		
Optional stack capacity	1 m - 40”		

Kongsberg C Series

Multifunction super-wide digital finisher for signage, display and packaging applications

The Kongsberg C stands for:

- **Capability**: the widest variety of materials with an extensive range of applications.
- **Capacity**: highest throughput of any super-wide digital finisher
- **Consistency**: same performance every time, for every material, for every job

Specifications for all C tables

- **Table control workstation** that can be mounted on either side in several different positions to adapt to customer requirements. monitor, keyboard, mouse and table operation panel including joystick for jog operations.
- **Automatic tool level measurement**
- **Print registration and compensation**: a camera system registers the actual dimensions and positions on the printed result by reading any number of registration marks. Then, finishing is adapted to the shape of the graphics.
- **Operator safety**: the DynaGuard Safety System protects the operator and bystanders from potential machine hazards. In addition the machine is equipped with emergency stop buttons and a warning light, which is lit as long as the servos are powered.

	C60	C64	
Work area	3210 x 1600 126.37 x 63	3210 x 3200 126.37 x 126	mm in.
Max. material size, w/o conveyor feed	3330 x 2125 131 x 83½	3330 x 3730 131 x 147	mm in.
Max. material size, w/ conveyor feed	3210 x 2125 126½ x 83½	3210 x 3730 126½ x 147	mm in.
Overall dimensions incl. workstation	5100 x 2320 201 x 91½	5100 x 3920 201 x 154½	mm in.
Overall dimensions excl. workstation	4260 x 2320 168 x 91½	4260 x 3920 168 x 154½	mm in.
Weight	800 1760	1300 2870	kg lbs
Max. speed	100 m/min - 66 IPS		
Vacuum sections	4	8	
Traverse clearance (excl. cutting underlay)	70 mm - 2.75”		

- **User interface / control system**: *i*-cut Production Console (from 01 April 2015)
- **Optional automation features**: Conveyor system with wide format roll feeder for automated production from roll. Capacity: 100 kg/220 lbs

XE tool units

The Kongsberg XE features an tooling system with a variety of tool units, designed for lightning-fast motion combined with superb accuracy to increase finishing productivity and quality for a wide range of materials.

The XE tooling system offers two configurable tool positions with quick connectors prepared for a range of advanced tool units and a fixed tool position for a standard multifunction unit.

- PressCut tool
- VariCut tool
- Static knife tool
- HiForce knife tool
- Crease tool
- VibraCut tool
- HiFrequency VibraCut tool
- RotaCut tool

More information on the tools and materials they can cut can be found in the Kongsberg XE material and tooling guide.

XN tool heads

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 XN tool heads 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 XN 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

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

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

large frontal 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.

MultiCUT-HP (High Power)

The MultiCUT-HP (High Power) is equipped with a super-strong, liquid-cooled 3kW high power milling spindle. By combining a dependable, high-capacity milling solution with tooling for high-quality knife cutting and creasing, it is a great choice for shops that need to process the full range of sign and display material.

FoamHead

The FoamHead utilizes a reciprocating knife for handling **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**. To produce output with maximum cutting accuracy three different blade lengths may be used. Each blade length needs a specific adapter, which is included with the FoamHead.

FoamHead is capable of:

- 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.

More information on the tools and materials they can cut can be found in the Kongsberg XN /XL material and tooling guide.

XP / C Series tooling system

The XP / C Series tooling system consists of a wide variety of optional tool units. These can be quickly mounted in the tool position accommodated for the tool and prepared to cut and finish a specific job, assuring exceptional quality and prompt delivery. Three tool positions are available, enabling usage of three tools within the same job.

Tool position 1 is for heavy tools optimised for power, like the Heavy-Duty Tool Unit for V-notching and creasing with a power of 50 kg – 110 lbs, 1 kW or 3 kW Milling Units for a wide range of rigid materials and the Foam Cutting Unit for thickness up to 50 mm - 2".

Position 2 is for a set of static and reciprocating knife tools optimized for fast movements.

There is also an optional **third tool position** that accommodates inserts for either pen plotting or drilling of holes. In addition, the tooling system includes laser pointer for indexing, a material thickness probe and an optional camera for registering to printed images.

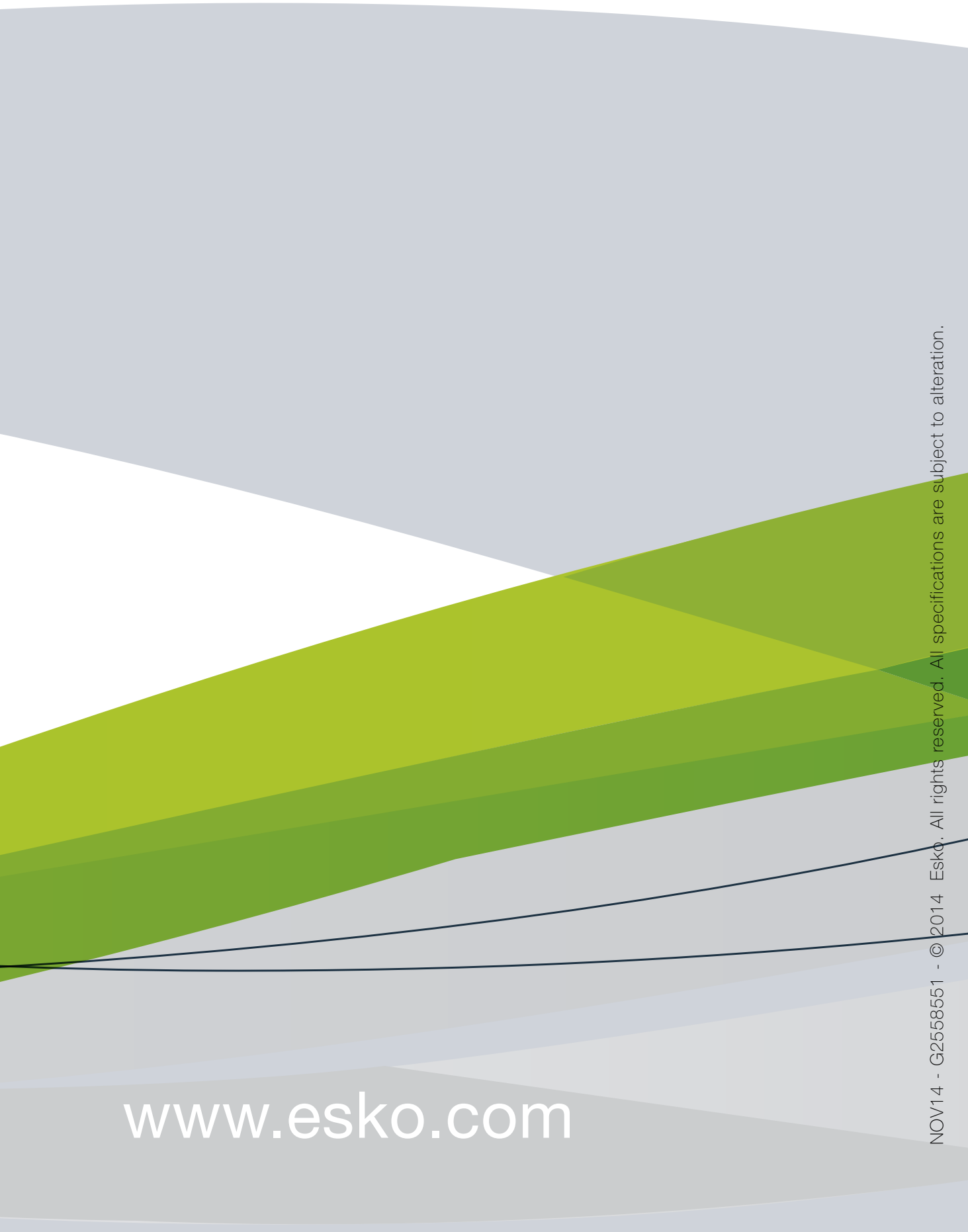
More information on the tools and materials they can cut can be found in the Kongsberg XP / C series material and tooling guide.

i-cut Production Console

i-cut Production Console (iPC) is the new front-end software for the Kongsberg tables. It offers unprecedented functionality for signage, display and packaging production and a completely new and intuitive user interface. iPC use large icons and colors to communicate with the operator in distance view.

It is made very easy and quick to change between jobs, regardless of material. Installed with iPC is a wide range of Cutting Keys with recommended tool setup for packaging and signage materials, for consistent cutting results.

A number of features for short run production support is included, including status displays and job interruption control.



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