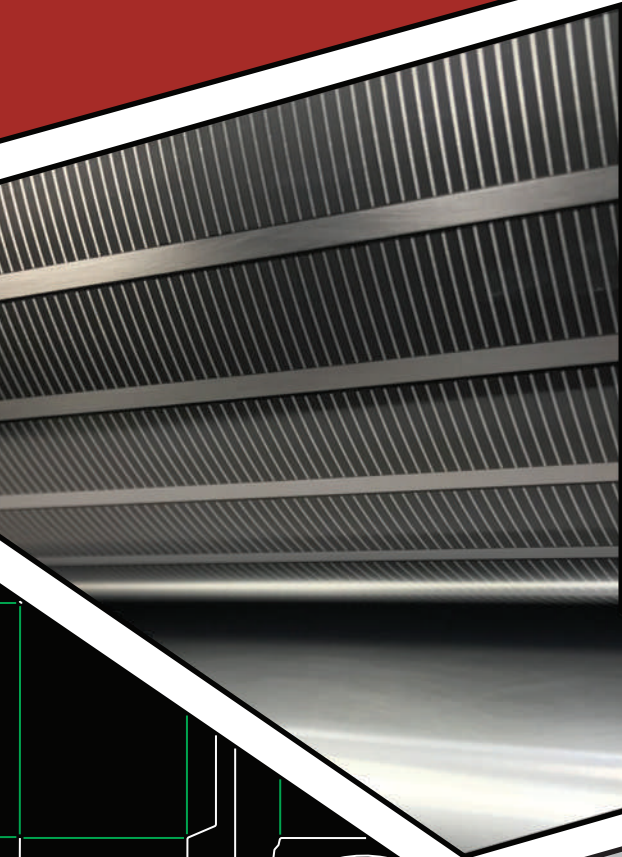


# Insignia

DIE CUTTING

## Insignia Die Cutting Systems, Information & Specifications



# Single & Dual Magnetic Cylinder Configurations

Each Insignia machine contains two cylinders; an upper and a lower. The upper cylinder is always magnetic and houses a flexible die, and a choice is offered with the lower cylinder between a matching magnetic cylinder or a hardened, solid anvil cylinder.

The difference between these two systems is that a dual magnetic 'H model' machine can accept a paired set of 'male/female' dies to cut with, whereas a single magnetic machine will utilize a single die tool and cut against a precision-ground lower anvil cylinder.

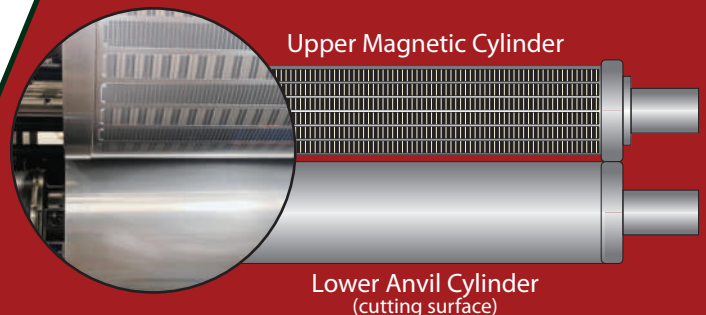
A **single magnetic system** is recommended to produce pressure sensitive kiss-cut work, or flat cut products.

A **dual magnetic system** is commonly utilized when running packaging products or folding carton work.

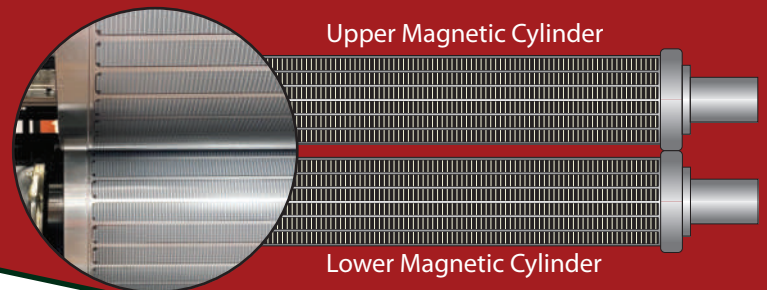
A dual magnetic machine can be converted into running with a single cutting die using a blank jacket on the lower cylinder when looking to run flat cut products or kiss cut work. A set of dies can be inverted on the cylinders to run material face down for back slitting.

The illustration below highlights a single vs. dual magnetic cylinder configuration. The primary difference between the two is utilizing a single flexible die or a paired set to channel score or emboss with no make ready. There are ways to create folds on a single magnetic system, however to emboss requires a paired set of dies on a dual magnetic machine. A blank die can be used on the lower cylinder for pure die cutting applications on dual magnetic machines.

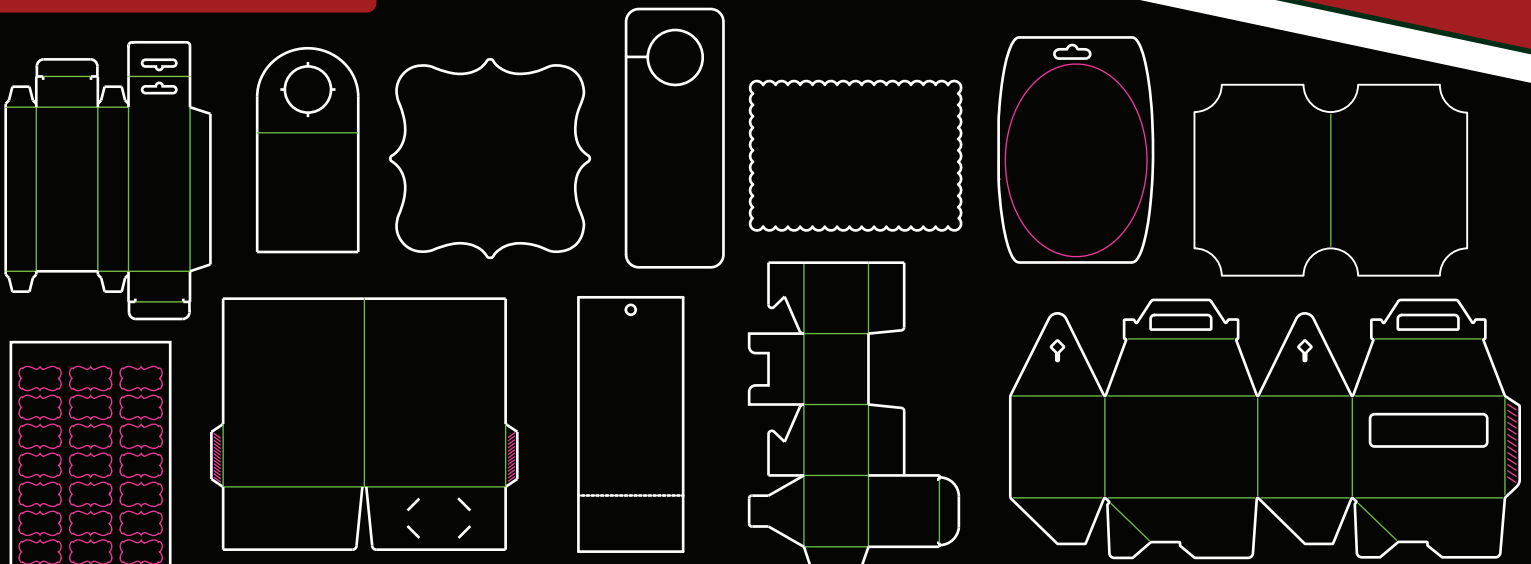
## Single Magnetic



## Dual Magnetic 'H'



## Common Applications:



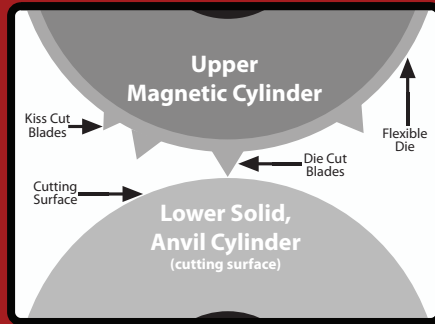
# Single & Paired sets of Flexible Dies

A **single magnetic machine** will utilize one upper flexible die and cut against a lower, hardened anvil cylinder. A single magnetic configuration is ideal when straight die cutting, or when kiss cutting to an adhesive liner.

A single flexible die can be mounted into the recessed scribe line for quick, easy positioning and adjustment.

A **dual magnetic 'H' machine** utilizes two flexible dies running as a 'male/female' paired setup to channel score or emboss substrates, or to cut from the underside. A channel score or embossing elements can be achieved from either the top or bottom die tool.

Dual magnetic cylinders allow for zero make-ready when producing pocket folders or folding cartons as well as enables embossing or debossing of substrates in a single pass.



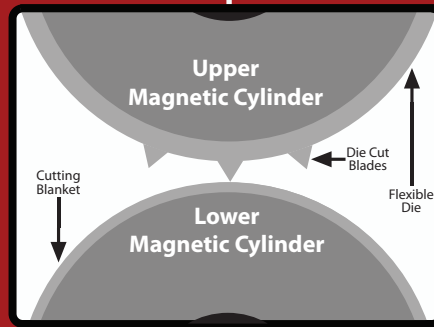
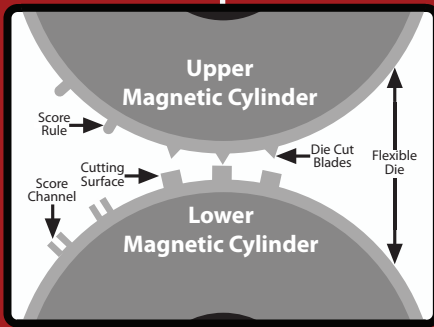
Common applications for single magnetic machines include (but are not limited to); shaped greeting cards, packaging inserts, decals and pressure sensitive applications cutting to a liner, garment tags, event passes, invitations, door hangers, bottle neckers, ID card carriers and much more.

Applications commonly produced requiring a dual magnetic machine could consist of; channel scored folding cartons, presentation folders, embossed envelopes, uniquely shaped direct mailing pieces, POP displays and fold over greeting cards.

With a single magnetic die cutting station it is possible to apply a matrix or counter to the anvil cylinder to channel score.

With a dual magnetic die cutting station a set of die tools can be made with cutting blades on both upper and lower tool at the same time, as long as they are in varying locations. Embossing elements can also be inverted as desired.

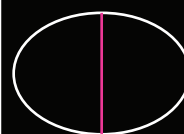
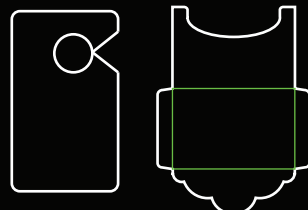
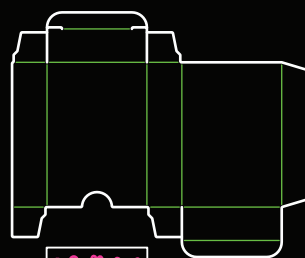
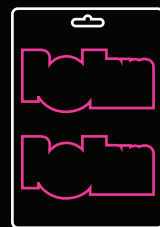
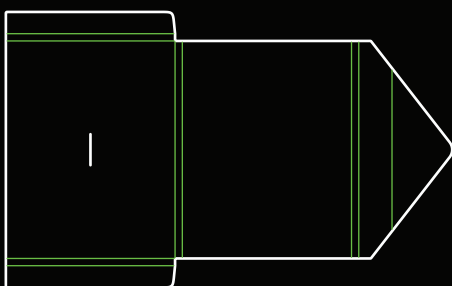
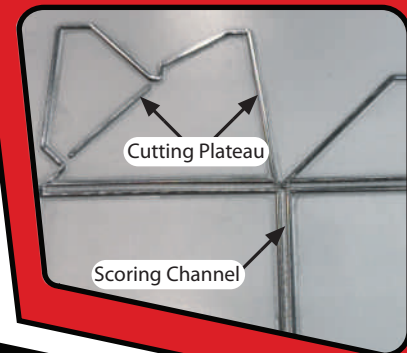
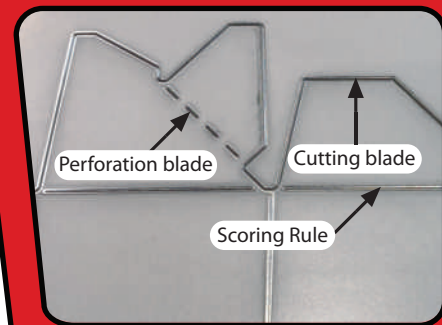
## Dual Magnetic



A dual magnetic Insignia system is capable of accepting a single upper cutting die while utilizing a lower solid "blanket" or "jacket" die on the bottom magnetic cylinder to act as the cutting surface when strictly cutting a substrate. (shown above, right)

A paired set of flexible dies is mounted onto the cylinders via a pin mounting system as alignment is crucial with a paired set. The Insignia machine utilizes micro adjustments of the upper magnetic cylinder to ensure optimal alignment of the flexible dies to one another.

## Paired set of die tools



# Flexible Magnetic Dies vs. Steel-Rule Dies

Flexible dies have been in use for 30+ years on converted web printing presses to kiss cut adhesive materials. In years since, flexible die technology has advanced much further into die cutting of substrates as thick as 0.030" / 0.76mm.

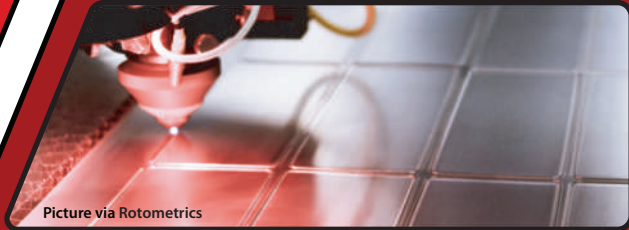
Some advantages to utilizing flexible die technology over steel rule / platen cutting tools are:

Because flexible dies are produced via CNC machine, the tolerances they are held to are far tighter than that of a steel rule die. Intricate die cutting patterns, multiple blade heights to die cut and kiss-cut, perforating blades, creasing elements and embossing patterns can all be placed within a flexible die.

After flexible dies are engraved via these CNC machines, they can be either laser hardened for extended die life, or coated for various adhesive cutting applications to prevent substrates from adhering to the die tools. Lifespan of the dies will depend on the substrate being cut and the finishing treatment they receive.

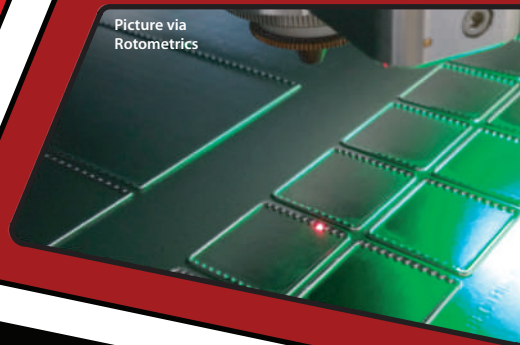


Picture via Wink

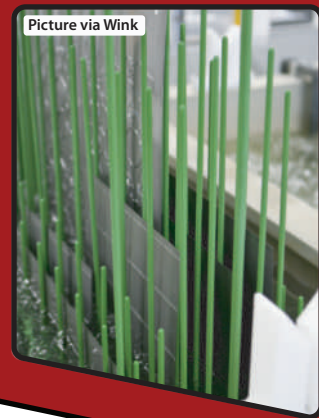


Picture via Rotometrics

Produced to tolerances of less than 0.001" / 0.02mm – flexible dies are extremely precise and thus allow for maximum accuracy when kiss-cutting to an adhesive liner. Extended die life is achieved when cutting against an anvil cylinder. Flexible die blades can be as close together as 0.055" / 1.4mm and obtain radius' as tight as 0.05" / 1.27mm. Non-standard perforation TPI as well as shaped or curved perforation blades, and multi-height blades within the same die tool are all possible.



Picture via Rotometrics

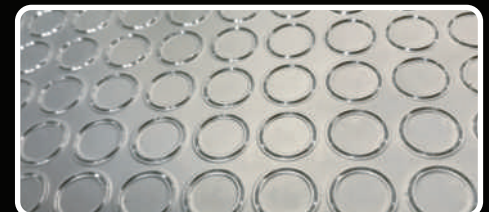


Picture via Wink



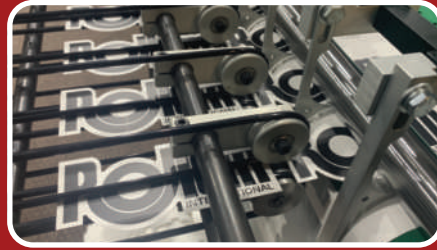
**Upper:** Steel Rule dies produced by pre-bent metal cutting blades being inserted into notches cut into a wooden base.

**Lower:** Flexible dies produced via CNC engraving machines that are capable of intricate patterns and multiple blade heights.

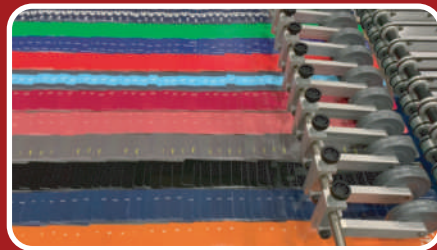


# Delivery Options

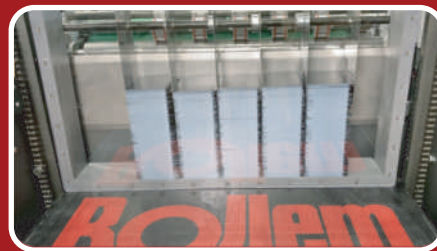
The Insignia machines can deliver either a full sheet of die cut or kiss cut product, or it can strip the die cut pieces from the matrix or skeleton of the sheet and deliver them onto a slow moving shingle delivery table, or into a vertically receding stack.



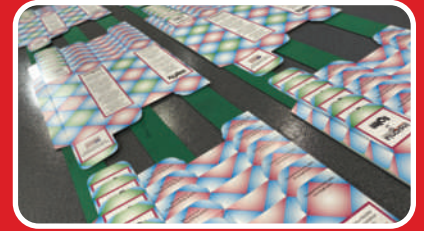
Product delivered onto a shingle table can vary from a single lane of product up to 6-12\* lanes depending on the size of the piece being cut. Interior holes within the die cut product can be removed with the Insignia Air Blast Kit.



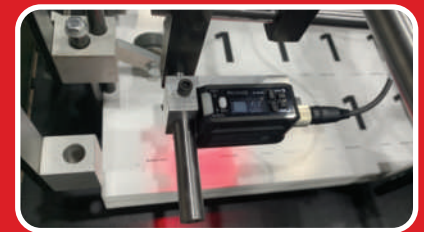
Another option for delivering stripped out product is into a vertically receding StackMaster delivery system capable of receding up to 24" / 61cm+ deep. The product is delivered into a removable cassette for minimal downtime.



Insignia machines can perform batching functions in two places within the system; a variable batching system functioning within the feeder, or a static batch system housed at the delivery.



A variable batching system is great for varying quantities of pieces within each order. This system relies on a printed mark as a trigger point.



A static batching system is effective for fixed quantities of product. This method of batch is accomplished at the delivery end of the Insignia system which allows for easy quantity separation.



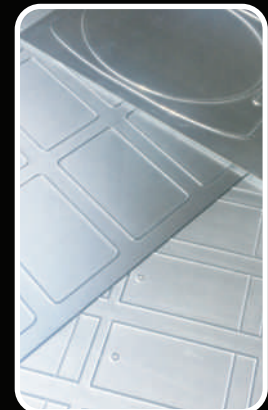
## Flexible Die Pricing Quotes

For flexible die pricing quotations please email:

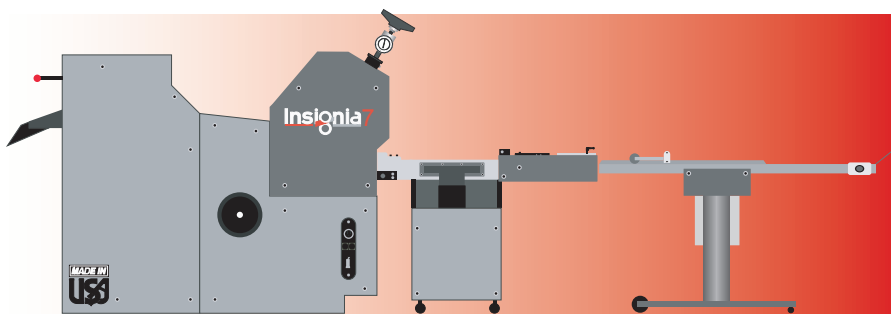
[Insigniadeline@rollemusa.com](mailto:Insigniadeline@rollemusa.com)

Please include in this email:

- Insignia machine: IS5, IS6, IS7 or ISX3
- Material information (sheet size, material thickness)
- Desire to strip out die cut pieces OR leave them inside the sheet

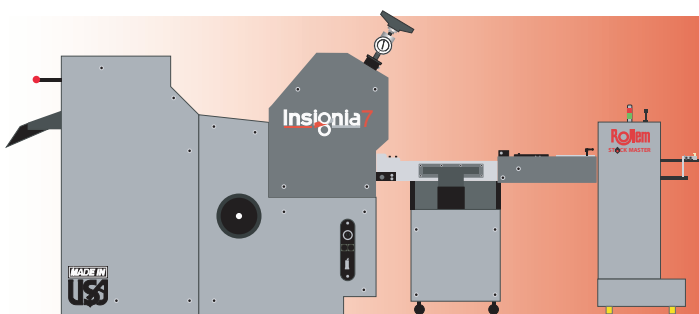
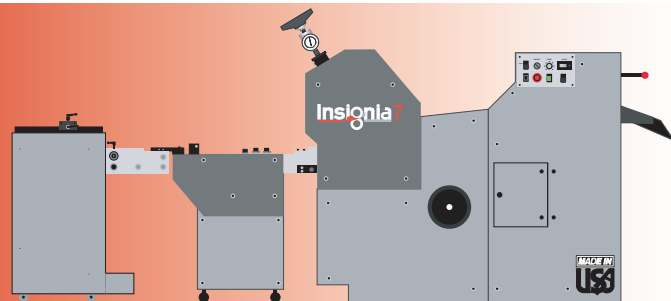


# DELIVERY SYSTEMS



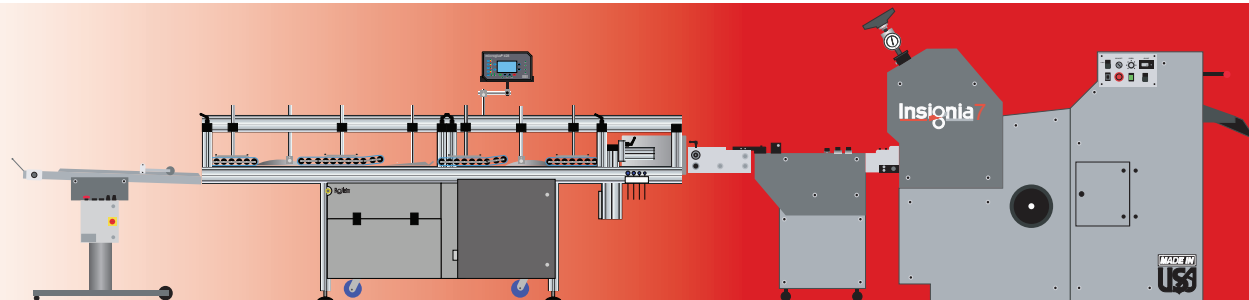
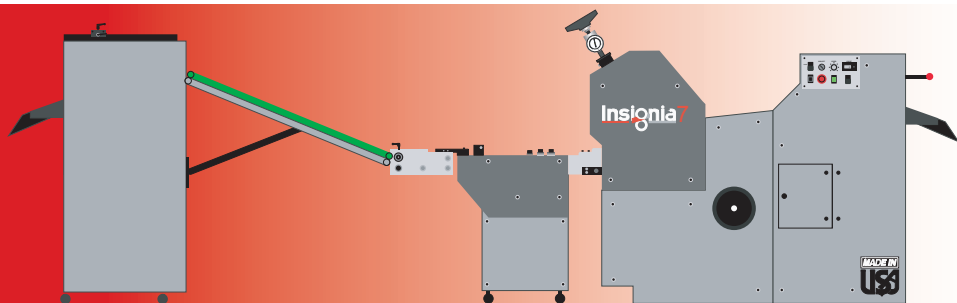
Illustrated left is a standard shingle delivery table supplied with all machines. This unit is capable of accepting many lanes of cut product or single-up pieces. Available in 3 or 5ft. (91.5 / 150cm) lengths with batching capabilities.

Illustrated right is a standard sheet stacking delivery option. This system is excellent at collecting kiss cut sticker or decal work, and for fully die cut material that is not automatically stripped out. Material is delivered onto a wheeled cart for easy off-loading. A pallet configuration is also available.



Illustrated left is a StackMaster delivery unit that is capable of accepting die cut product from a single lane to many-up lane configurations. Die cut product is stacked vertically for large volume runs and easier offloading. An optional delivery cassette is available for smaller size product.

The Illustration on the right shows a deep pile stacking delivery option. This delivery can stack the same amount of finished product from the Insignia feeder. This unit has an adjustable infeed ramp and is also available in a pallet offloading system.



Illustrated above is an Insignia system shown inline with a folding/gluing unit. An Insignia system can feed directly into another machine as shown, or a laminating unit, UV coating system or others. This configuration is commonly set for dedicated high volume production of a single or two product(s).

# MACHINE SPECIFICATIONS

	<b>Insignia5</b>	<b>Insignia6/6H</b>	<b>Insignia7/7H</b>	<b>InsigniaX3</b>
<b>Material Thickness</b>	Minimum: 60lb Cover / 50gsm Maximum: <b>0.020</b> / 380gsm	Minimum: 60lb Cover / 50gsm Maximum: <b>0.024</b> / 400gsm	Minimum: 60lb Cover / 50gsm Maximum: <b>0.024</b> / 400gsm	Minimum: 60lb Cover / 50gsm Maximum: <b>0.030</b> / 550gsm
<b>Sheet Size</b>	<b>8x10</b> Minimum (20x25.5cm) <b>20x15</b> Maximum (51x38cm)	<b>10x10</b> Minimum (25.5x25.5cm) <b>20x20</b> Maximum (51x51cm)	<b>10x10</b> Minimum (25.5x25.5cm) <b>30x24</b> Maximum (76x61cm)	<b>10x10</b> Minimum (25.5x25.5cm) <b>24x24</b> Maximum (61x61cm)
<b>Speed</b>	Variable up to 5,000 sheets per hour	Variable up to 5,000 sheets per hour	Variable up to 5,000 sheets per hour	Variable up to 5,000 sheets per hour
<b>Register</b>	4 Adjustable front head stops Side pull guide; left or right Gripper finger spring system	4 Adjustable front head stops Side pull guide; left or right Gripper finger spring system	8 Adjustable front head stops Side pull guide; left or right Gripper finger cam system	6 Adjustable front head stops Side pull guide; left or right Gripper finger cam system
<b>Feed</b>	Top suction air feed w/ 3 movable sucker heads. Front & side air separation. Feed capacity of ~36"	Top suction air feed w/ 3 movable sucker heads. Front & side air separation. Feed capacity of ~36"	Top suction air feed w/ 4 movable sucker heads. Front & side air separation. Feed capacity of ~40"	Top suction air feed w/ 4 movable sucker heads. Front & side air separation. Feed capacity of ~40"
<b>Cylinder Options</b>	Upper: magnetic, ceramic & steel Lower: Hard anvil no lower jacket required	Upper: magnetic, ceramic & steel Lower: Hard anvil, no jacket required <b>Optional dual magnetic H system</b>	Upper: magnetic, ceramic & steel Lower: Hard anvil, no jacket required <b>Optional dual magnetic H system</b>	Upper: magnetic, ceramic & steel Lower: Hard anvil no lower jacket required
<b>Footprint</b> <small>(w/ 5' delivery table)</small>	162 L x 48 T x 40 W 396cm L x 122cm T x 101cm W	170 L x 51 T x 40 W 417cm L x 129cm T x 101cm W	187 L x 59 T x 59 W 460cm L x 147cm T x 140cm W	187 L x 53 T x 55 W 460cm L x 135cm T x 140cm W
<b>Electrical Rqt.</b>	230v - 60Hz - 3-phase - 12amp 110v 1-phase line <i>*Other voltages available</i>	230v - 60Hz - 3-phase - 12amp 110v 1-phase line <i>*Other voltages available</i>	230v - 60Hz - 3-phase - 15amp 110v 1-phase line <i>*Other voltages available</i>	230v - 60Hz - 3-phase - 15amp 110v 1-phase line <i>*Other voltages available</i>
<b>Weight</b> <small>(die cutter only)</small>	2,900lbs 1,315kgs	3,600lbs 1,630kgs	4,800lbs 2,200kgs	4,200lbs 1,905kgs

## FLEXIBLE DIE MANUFACTURERS



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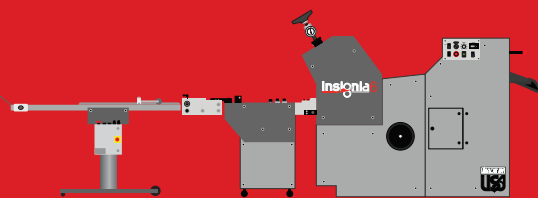
Each Insignia machine is produced completely in the USA and utilizes a register system similar to that of an offset printing press for superior sheet-to-sheet accuracy.

Able to run inline to many folding/gluing systems, the Insignia can become a production driven solution for both short and long runs.

Capable of producing an extremely wide range of products; door hangers, presentation folders, unique direct mail pieces, folding cartons, hang tags, decals ID cards and so much more.

The Insignia provides entry into high value packaging and commercial markets enabling greater in-house control over production and turn around times.

Make sending out  
work a thing of  
the past with the  
**Insignia**



Let Insignia  
change the  
shape of your  
business!

## Contact Rollem:

### WEB:

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- 🌐 [www.insigniadiecutting.com](http://www.insigniadiecutting.com)
- 📺 [www.youtube.com/rolleminternational](http://www.youtube.com/rolleminternational)
- 📞 **TOLL FREE (800) 272-4381**

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