

Insignia

DIE CUTTER
CONFIGURATION
BROCHURE

AeTee Group



One Size DOES NOT FIT ALL

THE INSIGNIA CAN BE CONFIGURED IN MANY UNIQUE WAYS

TO BEST SUIT EACH COMPANY'S INDIVIDUAL PRODUCTION REQUIREMENTS

Single vs. Dual Magnetic Cylinders

Each Insignia machine contains two cylinders; an upper and a lower. The upper cylinder is always magnetic and houses a flexible die, however a choice is offered on 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 machine will *always* require a paired set of "male/female" dies to cut with, whereas a single magnetic machine will utilize only one die tool and cut against a lower anvil cylinder.

A single magnetic system is recommended to users seeking to produce flat shaped products, or pressure sensitive kiss-cut work. A dual magnetic system is commonly utilized when running packaging products or carton work. Products such as folding cartons or presentation folders can be run in-line with a folding/gluing unit for single-pass production utilizing a single operator.

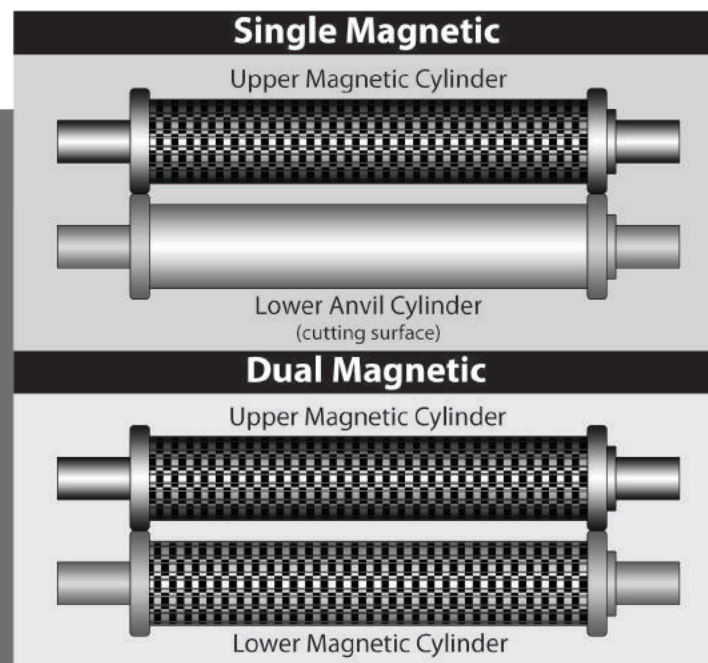
Single Magnetic:

- Greeting cards
- Decals/Stickers
- Invitations
- Garment tags
- Throw-away Packaging
- Event Passes

Dual Magnetic:

- Boxes/Cartons
- Pocket Folders
- POP Displays
- Packaging Products

The illustration to the right shows a **single vs. dual** magnetic cylinder configuration. The main difference between the two is utilizing either a single flexible die or a male/female set to channel score with no make-ready. There are ways to affect a fold on a single magnetic machine, utilizing either an adhesive matrix to score against or other methods built into the flexible dies, however the dual magnetic cylinder option is preferred for regular production of boxes.



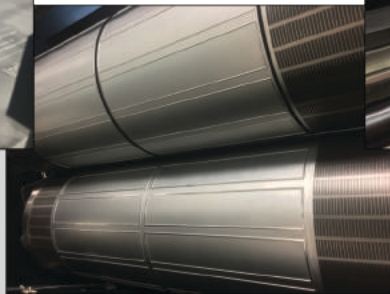
Feed & Register

Virtually all functionality of the Insignia machines are derived via mechanical movement as opposed to electronics or servo-motor drive. The feeder of the Insignia is a top suction air feed system designed for both production as well as versatility in feeding a wide range of materials. Housing its own Becker blower, the feeder is self-contained and adjustable for any sheet size and almost any weight/thickness of material.

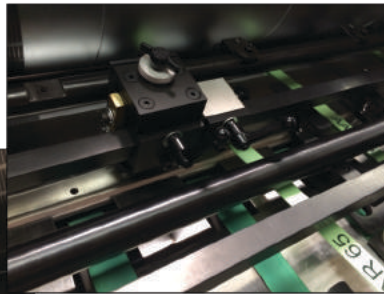
The register system on the Insignia is a tried and true guide-and-grip register system, similar to those found on off-set presses. Utilizing front head stops as well as a side pull guide capable of pulling either right or left, each sheet is independently registered and then pulled through the cutting station via gripper fingers housed in the lower cylinder.



Above is the feed table of the Insignia machines. Each sucker head is adjustable vertically and laterally, allowing for true contact points when feeding specialty substrates or material with a curl. Mechanical timing throughout the machine ensures timing of feeder stays consistent. The volume of air blow and suction employed via the sucker heads is each adjustable for various substrates from thick cardstock or laminates to thin cover weight stocks.



Above is a dual magnetic cylinder configuration on an Insignia machine. Each cylinder is machined to perfect concentricity. Dies are applied or removed purely via magnetism, and are aligned to the cylinder by either a pin mounting system or a recessed scribe line to ensure dies are straight on the cylinder. The upper cylinder rides on the lower to create a fixed gap where the cutting occurs.



Shown above is the pull guide of the Insignia register system. The top thumb screw controls the pull pressure to account for thicker vs. thinner materials, and the silver block on the right is a micro adjustment of the side pull guide used for fine tuning registration. Each sheet is registered independently which allows for an extremely tight sheet-to-sheet tolerance. Pull guide can pull left or right with a 5 minute adjustment to the machine.

Feeder:

- 36-40" feed capacity
- Independently adjustable volume of blow & suction.
- No house air required.
- Optional anti-static kit available.
- Double sheet detector

Register:

- Front head stops.
- Side pull guide capable of left or right register.
- Gripper finger system to ensure accuracy.
- Sheets are registered to edges of the sheet, not to the print.

One Size DOES NOT FIT ALL

Bearer vs. Non-bearer Cylinders

Each Insignia machine contains two cylinders; an upper and a lower. A bearer cylinder system operates with each cylinder containing a raised, hardened ring on each end of the cylinder that corresponds to matching lower rings on the bottom cylinder. These hardened rings, or bearers, function to provide a floor for the cylinder to run against, meaning the gap between upper and lower cylinder is fixed and unable to be opened or closed. This prevents an operator from accidentally crushing or damaging a die tool, as well as provides stability in the cutting station between the cylinders.

A non-bearer version of the machine is available upon request that is designed for label producers who run large volumes of kiss cutting or half cutting work. This version of the machine allows for adjustment of the gap between the cylinders, which enables one die tool to kiss cut to an infinite number of pressure sensitive liners.

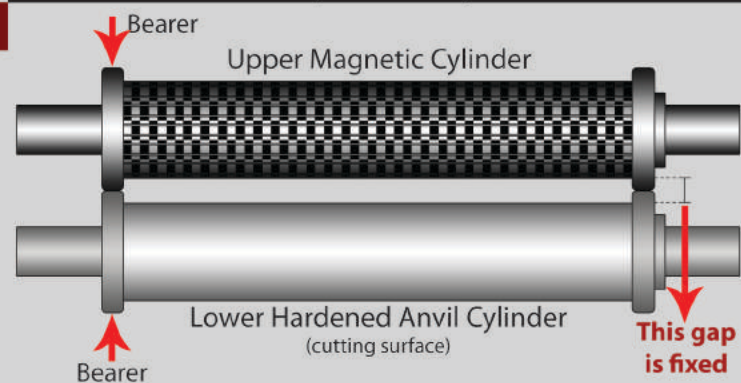
Bearer:

- Operator cannot mistakenly crush dies.
- Fixed cylinders ensure cut through of thicker materials and products in grid layouts.
- Ensures precision in cutting station of machine

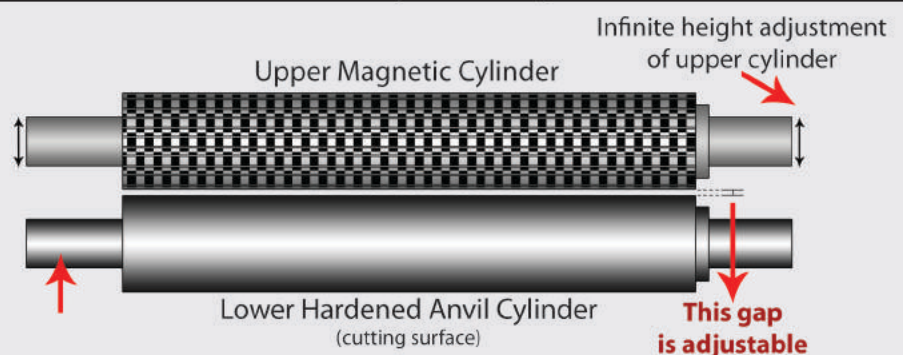
Non-Bearer:

- Kiss-cutting to an adhesive liner.
- Operator can make infinite depth adjustments to the die tool.
- Back slitting
- Decal work

Bearer Cylinder System

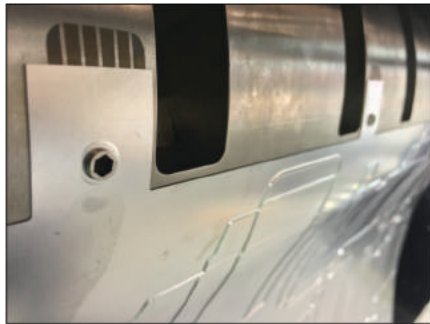


Non-Bearer Cylinder System

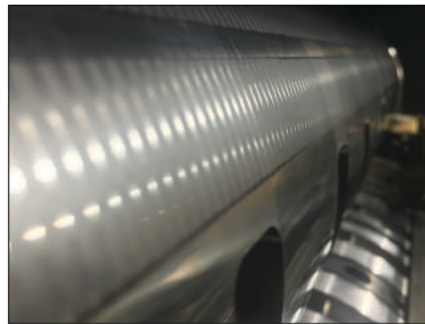


Die Mounting

Flex dies mount onto each cylinder configuration in one of two ways. For single magnetic cylinders, the dies mount into a recessed scribe line and want a straight leading edge built onto the dies. For dual magnetic machines a pin mounting system is utilized. The die sets are built with corresponding pins that ensure consistent mounting each time as well as proper pairing with the counter plate. (both shown below)



Dual Magnetic Pin Mount



Single Magnetic Scribe line



Dual magnetic Insignia7 cylinder

Pin Mount:

- Dies always mounted parallel
- Enables perfect mating of paired sets of dies.
- Allows for inversion of die tools

Recessed Scribe Line:

- Allows for quick, easy mounting of a single flex die.
- Ensures parallel of die tool on cylinder.
- Provides lateral flexibility in placement of die on cylinder.

MACHINE SPECIFICATIONS:

Insignia5

Insignia6

Insignia7

Footprint:
(including delivery)

96" L x 48" T x 40" W
152cm L x 122cm T x 101cm

104" L x 51" T x 40" W
172cm L x 129cm T x 101cm W

115" L x 59" T x 55" W
200cm L x 147cm T x 140cm

Electric:
(US standard)

230V - 60Hz - 15amp -
3-phase line
110v 1-phase line

230V - 60Hz - 15amp -
3-phase line
110v 1-phase line

230V - 60Hz - 20amp -
3-phase line
110v 1-phase line

Weight:
(diecutter only)

2,900lbs / 1,315kg

3,600lbs / 1,633kg

4,800lbs / 2,177kg

Sheet Size:

20x15"
51x38cm

20x20"
51x51cm

30x24"
76x61cm

*Other voltage / power requirements available for export upon request.

One Size DOES NOT FIT ALL

Single vs. Paired Sets of Dies

A single magnetic machine will utilize one flexible die and cut against a lower, hardened anvil cylinder. A dual magnetic machine utilizes two flexible dies running as a male/female paired setup to channel score substrates or to kiss cut. A channel score can be achieved from either the top or bottom die tool. A single magnetic configuration is ideal when straight die cutting, or when kiss cutting to a liner. Dual magnetic cylinders enable zero make-ready when producing pocket folders or products such as folding cartons.

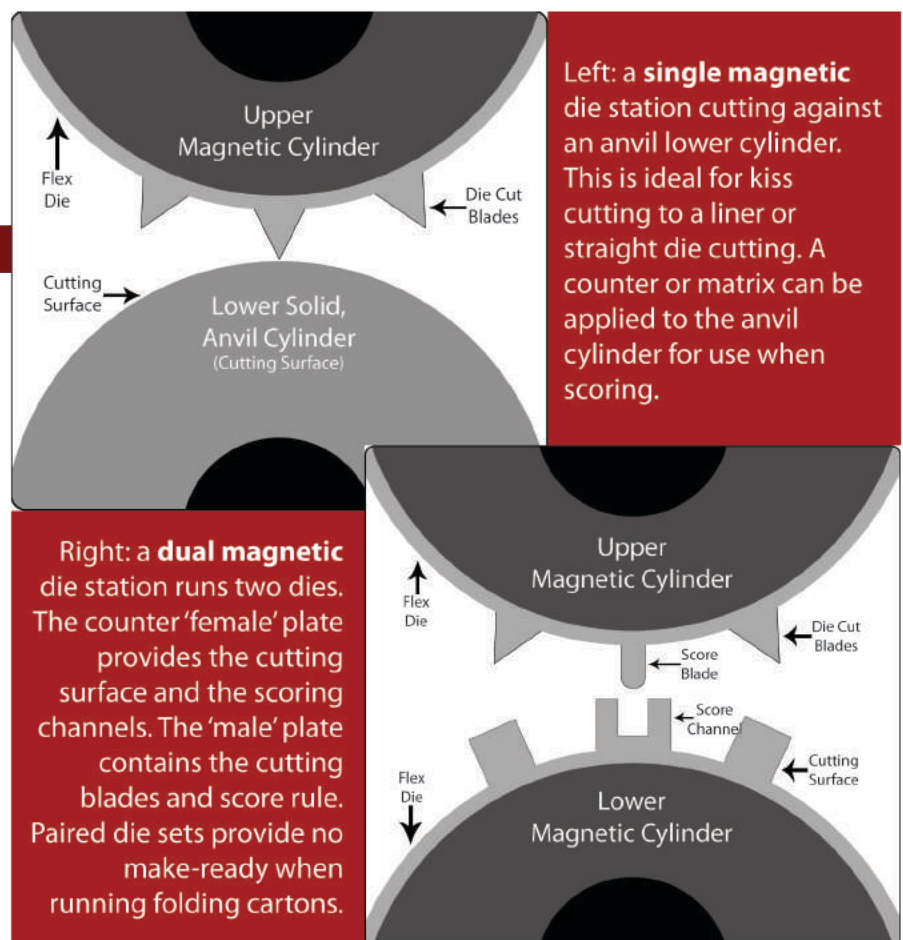
The Insignia can run in-line with a folder-gluer to enable single pass production from printed sheet to folded, glued product utilizing a single operator. Two lanes of product are capable of running in-line through gluer from die cutter if size allows.

Single Magnetic:

- Greeting cards
- Die cut/kiss cut decals
- Garment tags
- Inlays
- Custom shaped passes

Dual Magnetic:

- Folding cartons
- Pocket folders
- Direct mail pieces
- Packaging inlays
- Envelopes



Delivery Systems

There are two delivery systems available to run behind the Insignia machines. The first option is a waste stripping unit, which is designed to remove the cut pieces from the matrix or skeleton of the cut sheet, and deliver the pieces out onto a slow moving conveyor table.

The second option of delivery is a high capacity receding stacker designed to accept full sheets of either kiss-cut labels or die cut pieces held intact via tick marks. This delivery is supplied with two trollies for continuous production.

Either delivery is able to be swapped out for one another in under five minutes. An optional bin system is available behind the delivery table to catch additional product.

Stripping Unit:

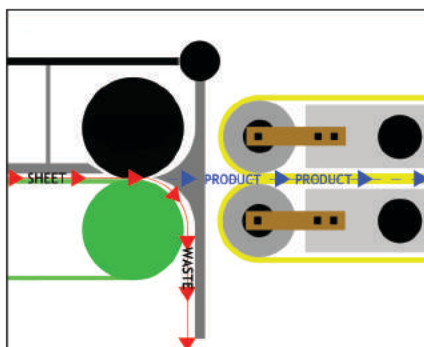
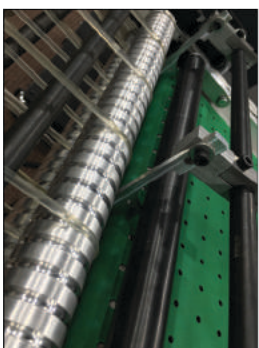
- Deliver finished pieces onto shingle table.
- Ability to blow out hanger holes of product.
- Ability to create separation between rows of products.
- Eliminates labor.

Receding Stacker:


- Catch full cut sheets.
- Wheeled cart for continuous production.
- Wheels up right behind stripping unit to replace shingle table if stacked delivery is desired.
- Five minute change over from stripping unit to receding stacker.



Depicted below is how the waste **stripping unit** removes the waste from the skeleton or matrix of a die cut sheet. Various width of trim deflector are utilized on the outside edges of the sheet along with any interior continuous gutters within the sheet. The skeleton of the sheet is diverted down into a waste bin, and the die cut product is allowed to continue on into a transport section running at a greater speed than the vacuum table. This spaghetti belt transport section can be angulated to create separation between streams of product. From the transport section each cut piece is delivered out onto a slow moving shingling conveyor table. The **receding stacker** delivery is depicted in the far right picture. Sheets are delivered in-tact with product held in via tick marks.



Contact AeTee

 Unit 3, Springmill Industrial Estate
Avening Road, Nailsworth, Gloucestershire
GL6 0BS UK

 + 44 (0) 1453 836 522

 sales@klugeint.com

 www.kluge.com

 www.aetee.com

 [Insigniadiecut](https://www.youtube.com/Insigniadiecut)

 [@AeTeeLimited](https://twitter.com/AeTeeLimited)

 www.insigniadiecutting.com

