

Printing capabilities of thermal transfer coders

SmartDate® 5 Series ■ ■ ■



Marking and coding ■ ■ ■

For over a decade, Markem-Imaje has pioneered thermal transfer coding technology. Our comprehensive SmartDate® 5 Series of coders provides the most reliable high quality codes on flow-wrappers, bags, tray seals, pouches, sachets, vacuum packs or labels.

Performance ■ ■ ■

Printer and Cassette – Durable wear resistant design. Adaptable for intermittent or continuous line configuration. Left or right hand operation. Meets extreme production line speeds. Multiple ribbon save features. Industry leading 0.5 mm gap between prints. Capable of serialized 2D codes.

Controller – Multiple user interface options including color touch screen and web pages. Dedicated buttons for frequently used functions. USB for image and file data transport. Equipped with power save mode.

Print Area –

SmartDate® 5:

Intermittent: 53 mm x 75 mm (2.1" x 3.0")

Continuous: 53 mm x 150 mm (2.1" x 5.9")

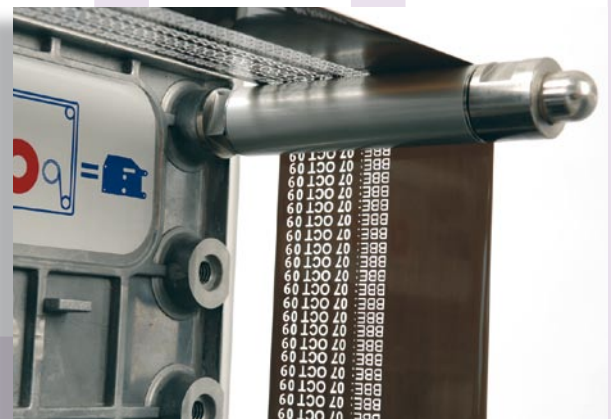
SmartDate® 5s (shuttled):

Continuous: 53 mm x 100 mm (2.1" x 3.9")

SmartDate® 5/128:

Intermittent: 128 mm x 75 mm (5.0" x 3.0")

Continuous: 128 mm x 150 mm (5.0" x 5.9")



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the team to trust ■ ■ ■

Selection of the most suitable thermal transfer coder ■ ■ ■

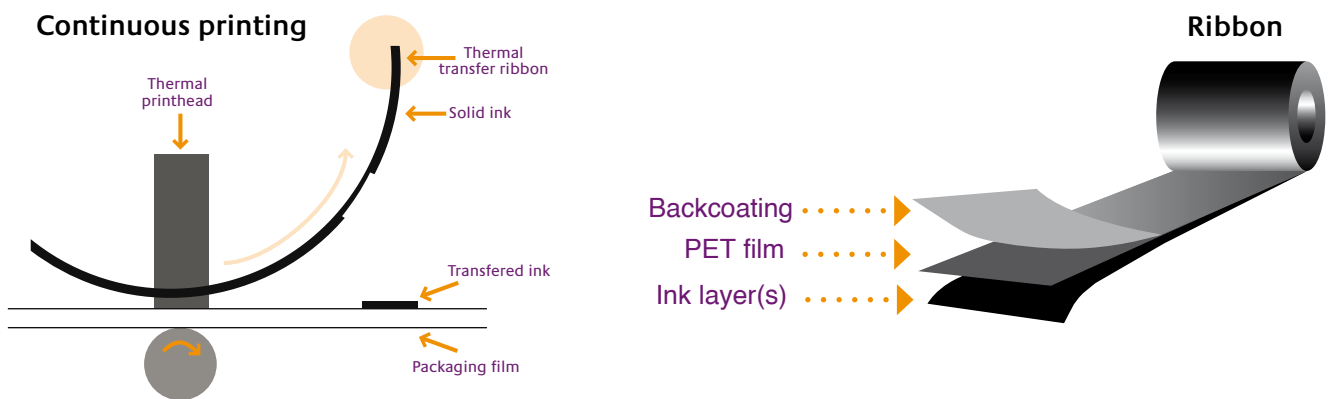
Thermal transfer technology ■ ■ ■

Thermal transfer technology combines a thermal printhead and a polyester ribbon coated with ink on one side. Heat transfers the ink from the ribbon onto the packaging film that is marked as it passes under the thermal printhead. The thermal printhead is made up of a row of independent tiny resistors mounted on a ceramic support. These resistors are then activated based on the characters to be printed, melting the ink on the ribbon and “transferring” the selected characters to the packaging film.



There are two types of thermal transfer coders depending on the application:

- Intermittent mode: Packaging film advances and then stops. The printhead lowers, moves along the packaging film and ribbon. The printhead prints. The printhead is raised, and returns to the home position, the ribbon advances and the process is repeated.
- Continuous mode: The packaging film is constantly moving. When triggered, the ribbon accelerates to the film speed, the printhead is lowered and printing begins. At the end of printing the printhead is raised to the home position and the ribbon stops moving.



Product comparison ■ ■ ■

		SmartDate® 5	SmartDate® 5s	SmartDate® 5 / 128
Print area	Width	53 mm	53 mm	128 mm
	Length	150 mm (cont.) 75 mm (int.)	100 mm	150 mm (cont.) 75 mm (int.)
Print speed (mm/sec)*	Normal	800 mm/sec	800 mm/sec	600 mm/sec
	Hi-speed mode	1000 mm/sec	1200 mm/sec	N/A
	DRS (Digital Ribbon Save)	N/A	1800 mm/sec	N/A
Ribbon length		900 m	900 m	600 m
Ribbon width (Min)		20 mm	20 mm	80 mm
Ribbon width (Max)		55 mm	55 mm	130 mm
Ribbon save options	Interlace	Yes	Yes	Yes
	Radial Ribbon Save	Yes	Yes	Yes
	Multi-print signal	Yes	Yes	Yes
	Negative ribbon advance	Yes	Yes	Yes
Intermittent/Continuous		Combined	Continuous only	Combined
Left/Right Hand		Easy change, no parts required	Easy change, no parts required	Easy change, no parts required
Minimum print speed		10 mm/sec	10 mm/sec	20 mm/sec

*Maximum, minimum print speeds and the suitability of ribbons and ribbon saving techniques are dependant on the individual application - if in doubt please contact your local presales team for further advice.

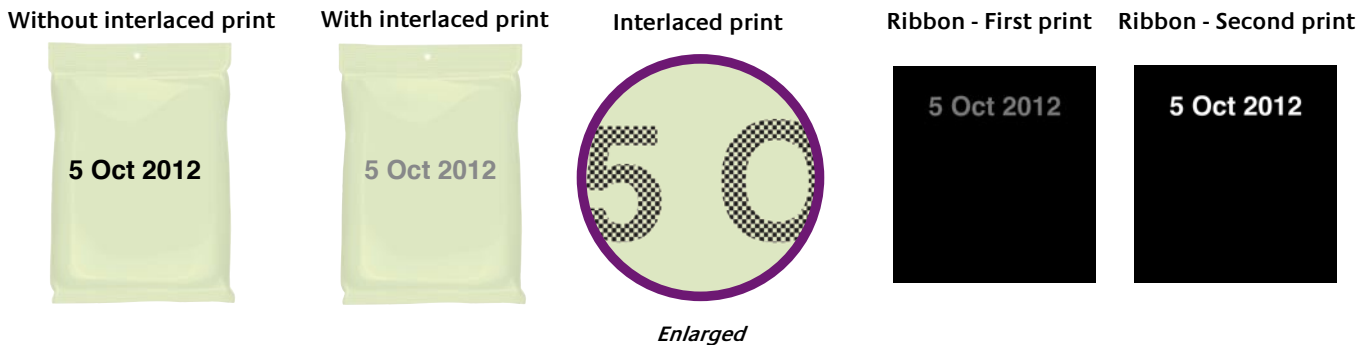
Ribbon comparison ■ ■ ■

TTR Grades: SmartDate® 2/3/5	Formula	Colors	Typical Speed [mm/s]	Notes
3410	Wax/resin	White, Red, Green, Blue - other colors on request	500	General purpose; color
3510	Wax/ higher resin	Black	600	General purpose: high mechanical resistance
7810	Wax/ higher resin	Metallic white	600	General purpose: high mechanical resistance
3710	Wax/resin	Black	300	Niche application: rough or porous substrates such as Kraft paper or Tyvek
3810	Wax/resin	Black	800	General purpose
3818	Wax/resin	Black	500	Economy grade
5810	Wax/resin	Black	1000	General purpose: high speeds
3910	Resin	Black, White, Red, Green, Blue	300	Excellent mechanical resistance
6910	Resin	Black	200	Superior heat and solvent resistance
SD 2/3/5	Wax/resin	Black	600	Niche application: polyethylene printed in a cold environment

Interlaced mode ■ ■ ■

Maximize ribbon usage:

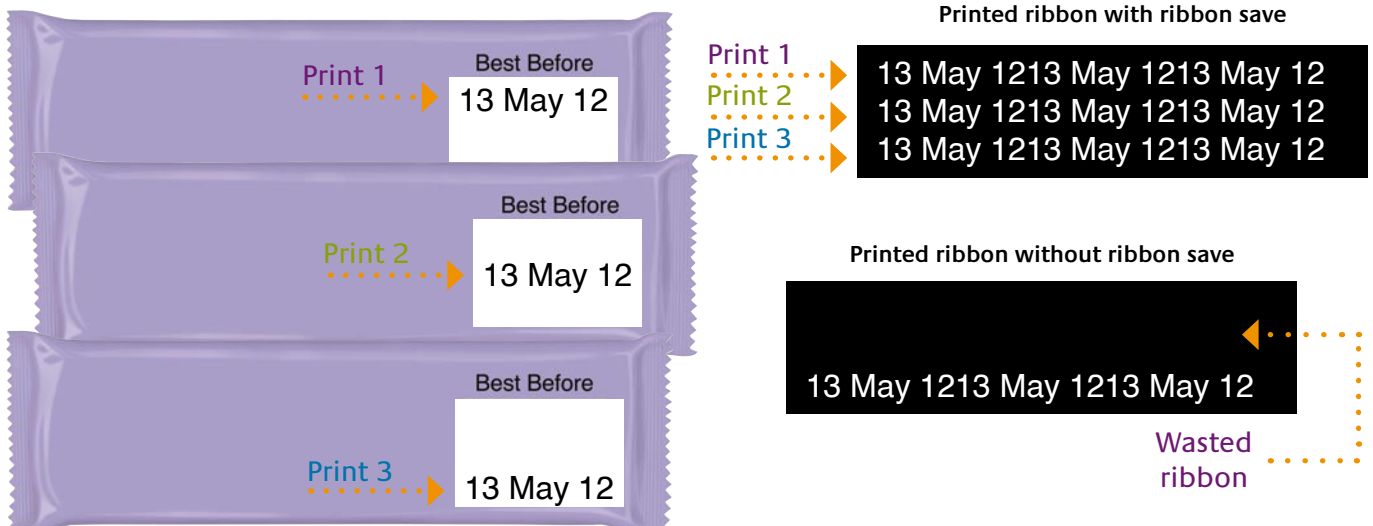
- First print uses every other pixel; the second print utilizes the unused ink leftover from the first print



Radial ribbon save ■ ■ ■

Maximize ribbon usage:

- Moves image across ribbon in radial direction using the entire width of the ribbon



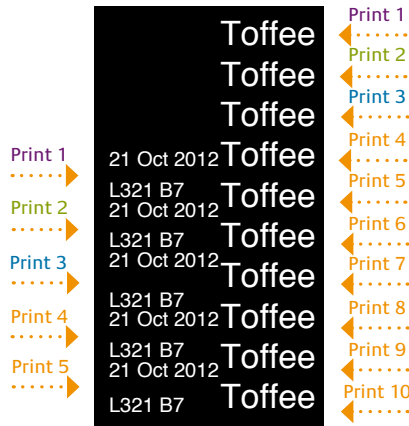
Negative ribbon advance ■ ■ ■

Maximize ribbon usage:

- Save on ribbon usage by assigning a negative value to ribbon advance setting



Printed ribbon with ribbon advance



Printed ribbon without ribbon advance



Multi-print signals ■ ■ ■

Maximize ribbon usage:

- Print different images on same substrate without additional adjustments



Printed ribbon with multi-print signals



Printed ribbon without multi-print signals



Examples of prints created in CoLOS® Professional ■ ■ ■

Capability to mix different character heights

(Including bold, italics or underline)

Date & Time Formats

(Automated, calculated, offset and linked dates)

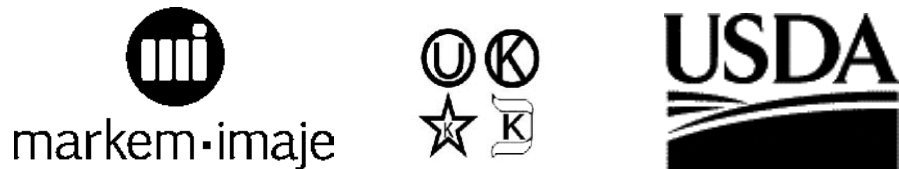
Produced **FEB 19 12** 26 03 2012
14:15:20 10:50:19
 Shift 3 A



True Type Fonts

Best By 19 02 12 Best By 19 02 12 最好的ベスト Best By 26/03/12 1,25€
 Best By 2013 02 25

Logos



Barcodes

(Code 128, code 39, EAN 128, EAN 8 & 13, ITF, UPCA, UPCE)



2D barcodes

(Datamatrix, GS1 DataBar™ (formerly RSS), QR, PDF 417)



Unlimited Text Fields

Nutrition Facts		Amount/Serving %DV*	Amount/Serving %DV*
Serving Size	1 Cookie	Total Fat 5g (8%)	Total Carb. 38g (13%)
Calories 210	Calories from Fat 45	Saturated Fat 0g (0%)	Fiber less than 1g (2%)
		Trans Fat 0mg (0%)	Sugar 19g (0%)
		Cholesterol 0mg (0%)	Protein 2g (0%)
		Sodium 160mg (7%)	
*Percentage daily Values (DV) based on a 2,000 calorie diet.		Vitamin A 10% • Vitamin C 0% • Calcium 0% • Iron 10% Thiamin 10% • Riboflavin 10% • Niacin 10% • Vitamin B 10% Folic Acid 10%	
Ingredients:			
<small>Enriched Flour (Wheat Flour, Niacinamide, Reduced Iron, Thiamin Mononitrate (Vitamin B1), Riboflavin (Vitamin B2), Folic Acid), Vegetable Oil (Soybean, Cottonseed and Hydrogenated Cottonseed Oil with TEHQ and Citric Acid for Freshness), High Fructose Corn Syrup, Brown Sugar, Corn Syrup, Dextrose, Sugar, Corn Syrup Solids, Cracker Meal, Contains Two Percent or Less of Salt, Caramel Color, Cornstarch, Wheat Starch, Natural and Artificial Flavors, Leavening (Baking Soda, Sodium Acid Phosphate, Monocalcium Phosphate), Cinnamon, Sesame, Modified Corn Starch, Soy Lecithin, Yellow 5 Lake, Potato Starch, Nacinnamide, Reduced Iron, Yeast, Vitamin A Palmitate, Pyridoxine Hydrochloride (Vitamin B6), Riboflavin (Vitamin B2), Thiamin Hydrochloride (Vitamin B1), Folic Acid.</small>			

The Markem-Imaje SmartDate® 5 Series offers the versatility you expect at a lower cost of ownership for coding on flexible packaging films, foils and labels. Reliability combined with unique ribbon saving options ensure significant savings in consumables and maintenance costs. Use Markem-Imaje CoLOS® Enterprise software to network and manage your coders remotely.

Food

Designed to print crisp, clean codes on a variety of substrates used in retail food and food service – even on packaging lines that run around the clock.



Pharmaceutical

High quality, permanent codes on pharmaceutical packaging materials such as labels, blister packs and films.



Other

Whether you're producing trial sizes or family packages, SmartDate® thermal transfer coders are ideal for printing directly on labels or flexible film.



OEM

Markem-Imaje works closely with the leading OEM's in the packaging industry to ensure our products are designed for easy installation. Our products include an option to connect via a web browser as to integrate the coder controls to host packaging machines.



To learn more, visit www.markem-imaje.com

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