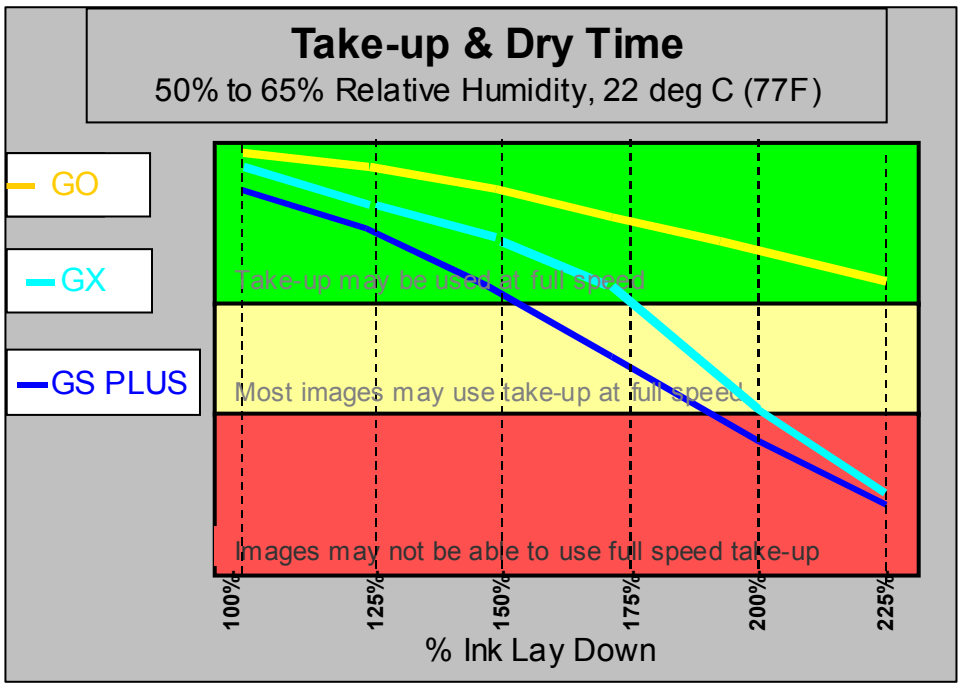
NJ800/KODAK 4800 SERIES TECHNICAL BULLETIN 2
Revised 11/22/2005
4 Pages

Kodak
wide-format printing solutions

Dry Time Guidelines - Printer in Auto Take-up Mode

The NovaJet 800/KODAK 4800 series printers are considered some of the fastest inkjet printers in the market. Consequently, certain images, using high-speed pass settings, may not have enough time to dry before being automatically rolled up on the take-up assembly. This is usually determined by the ink lay down percentage. Though a typical image would only use 150% ink lay down, some images that use more ink may require a slower print speed to use the auto take-up feature. The following chart is intended as a general guideline to monitor the output or indicate precautionary measures should be taken. Your results will vary depending upon environmental conditions, ink loading, media, and printer settings.

Example of results for KODAK Production Photographic Glossy Paper with 200% ink load:
The printer is set to Photo Mode (2x4 cartridge set, 3-pass print mode @ speed 10) with the Dryer ON – Heat setting of 100%. Printing using GS+ ink at 200% ink lay down, the GS+ line (the blue line) is passing through red area of the chart. This indicates there will not be enough time to completely dry the print before reaching the Automatic Take-up. Precautionary measures should be taken to insure that the image would not be damaged. Usually this would simply require selecting a slower print speed at the printer (If you are not familiar with this feature, please refer to the User Guide CD to select print speeds. Also refer to **Print Mode Comparisons** at the end of this document for real world printing operations/applications)

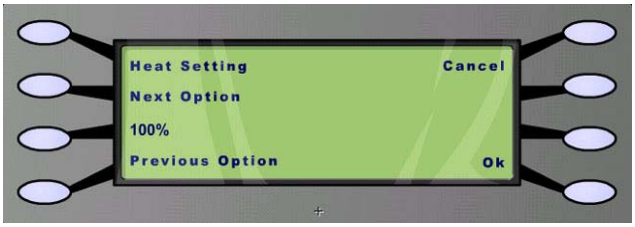


NOTE: These recommendations are based upon printing in conditions of 50% to 65% relative humidity (RH) and at ambient temperature (72° F, 22° C). You may experience different results if your temperature and humidity values are different. If your RH is less than 50%, you can expect much faster dry times. If your RH is greater than 65%, your dry times will normally be longer. *The above chart is intended as a general guideline.*

Lamination Time: In order to allow you to be as productive as possible, the NovaJet 800/KODAK 4800 series printers feature the Dynamic Thermal Drying system (DTD). When the Dryer setting is set to 'AUTO' (default) the printer monitors temperature and humidity and constantly adjusts the DTD operating temperature to provide consistent printer performance. In environments that are from 20-24° C (64-75°F) with 20% to 70% RH, images with up to 200% ink lay down may be laminated after 10 minutes from completion of the print.

CAUTION

At high ink density/saturation levels with certain types of media it is suggested not to the use the **'AUTO'** Dryer Setting as image deformation issues (i.e. vertical banding) may be encountered due to excessive heat temperature. If a problem is encountered place the Dryer setting to 'ON' and choose a specific **'Heat Setting'** value (i.e. change from 100% to 60%); run a test print to determine the optimum drying temperature for your specific media at given saturation level. Please refer to the on-line Media Technical Data sheets for specific printing/lamination tips and the Media Compatibility Chart on the last page of this document. General Dryer Heat Setting suggestions for KODAK media are shown below.



Media/Dryer Suggestions

KODAK Media	*Recommended Dryer Setting*
Photographic Papers	ON – Heating Setting of 100 or lower
Photographic Films	ON – Heating Setting of 70 or lower
Coated Papers	ON – Heating Setting of 100 or lower
Vinyls & Banners	ON – Heating Setting of 60 or lower
Canvas	ON – Heating Setting of 70 or lower

Print Mode Comparisons *(real world observations)*

- The 1x4 cartridge set running @ 6-pass print mode uses approximately the same amount of ink as 2x4 cartridge set running @ 3-pass print mode.
  – both modes use same amount of ink (since both are 4 color) for the same image printed; but because 2x4 is 30%+ faster, the ink consumption is therefore 30% higher for the same printing time period.

- The 2x4 cartridge set running @ 3-pass print mode is ~45% faster than the 1x4 cartridge set running @ 6-pass print mode.
  - Image quality is a little different between 2x4 operations and 1x4 operations.
  - 2x4 @ 3-pass is 30% faster than 1x4 @ 4 pass
  - 2x4 @ 4 pass is roughly 35% faster than 1x4 @ 6 pass
  - Print time also depends on the RIP and connectivity type used (parallel direct or via SEH/Built-in print server).

- The 1x4 cartridge set running @ 6-pass print mode has significantly better quality than the 2x4 cartridge set running @ 3-pass print mode.
  – Also, the 1x4 @ 6-pass has better quality than 2x4 @ 4-pass as well

- The 1x8 cartridge set running @ 6-pass uses 20-30% more inks vs 1x4 cartridge set running @ 6-pass but print time is about the same
  – Across a broad range of tested images customers have observed an increase of ink usage anywhere from 5% up to 47%; dilution ink (i.e. light Mag/Cyan and medium Mag/Cyan) consumption largely depends on gradients/color ranges printed in a given image.
  - The increased ink consumption average (going from 4 color to 8 color printing) is approximately 27%, but it really depends on the colors in the image. The lighter density fills (especially with people's faces and light/gradual gradient changes) will use more dilution inks – overall saturation levels need to exceed 200% to peak the higher ink usage levels though.
  - Observed image quality in the 1x8 cartridge set is superior over both 1x4 and 2x4 cartridge sets.

ORDER NUMBERS									ENCAD/KODAK								HP		CANON		EPSON			COLORSPAN		ROLLAND		MUTOH	
									Encad 1000i Kodak 1200i		Encad NJ PRO/Cut 500/PROe Series 600/700/800 Series			Kodak 4000 Series			2000/3000/ 5000 Series		7000D/ 8000D/ Series	6000Pg/ 8000Pg Series	7000/9000 Series	10000 Series	4000/7000/ 9000/10000 Series						
Short Roll	24" (60.9cm)	36" (91.4cm)	42" (106.7cm)	50" (127cm)	60" (152.4cm)	Photographic Papers	Roll Length	Dye	Pigment	GS & GS+	GX	GO+	Lightfast Dye Plus	Pigment	Dye	UV	Dye	Pigment	Dye	Photographic Dye	Ultrachrome Archival	EnduraChrome	PermaChrome	Dye	Pigment	Dye	Pigment
8900789	1539832	8989212	8407991	–	–	Kodak Premium Rapid-Dry Photographic Glossy Paper / 260g†	(30.5 m / 100' rolls)	■	●	■	■	◆	◆	◆	■	●	■	●	■	■	●	■	◆	■	●	■	●
1604123	8512899	8201402	8929515	–	–	Kodak Premium Rapid-Dry Photographic Lustre Paper / 260g†	(30.5 m / 100' rolls)	■	●	■	■	◆	◆	◆	■	●	■	●	■	■	●	■	◆	■	●	■	●
222735-00	222730-00	222731-00	222732-00	222733-00	222734-00	Kodak Rapid-Dry Photographic Glossy Paper / 190g	(30.5 m / 100' rolls)	■	●	■	■	◆	◆	◆	■	●	■	●	■	■	●	■	◆	■	●	■	●
222742-00	222737-00	222738-00	222739-00	222740-00	222741-00	Kodak Rapid-Dry Photographic Satin Paper / 190g	(30.5 m / 100' rolls)	■	●	■	■	◆	◆	◆	■	●	■	●	■	■	●	■	◆	■	●	■	●
8795379	–	8717423	1363076	1694447	1889062	Kodak Premium Photographic Glossy Paper / 270g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	●	◆	●	◆	◆	◆	◆	◆
8246217	1177781	1790203	1393768	8582967	8669475	Kodak Premium Photographic Glossy Paper / 180g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	●	◆	●	◆	◆	◆	◆	◆
8154304	1439942	8542003	8599185	1638436	8833782	Kodak Premium Photographic Satin Paper / 180g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	●	◆	●	◆	◆	◆	◆	◆
1687011	1171099	8876310	8094807	8558926	1323245	Kodak Premium Photographic Matte Paper / 180g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	●	◆	●	◆	◆	◆	◆	◆
222762-00	–	222763-00	222764-00	222765-00	222766-00	NEW Kodak Production Photographic Glossy Paper / 170g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
222767-00	–	222768-00	222769-00	222770-00	222771-00	NEW Kodak Production Photographic Satin Paper / 170g	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
						Photographic Films																							
8534588	–	8507097	8934101	1563428	1937846	Kodak Premium Backlit Film / 7mil	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
222772-00	223712-00	222773-00	222774-00	222775-00	222776-00	NEW Kodak Universal Backlit / 8mil	(30.5 m / 100' rolls)	■	●	■	■	●	■	●	■	●	■	●	■	■	●	■	●	■	●	■	●
222777-00	–	222778-00	222779-00	222780-00	222781-00	NEW Kodak Production Backlit Film / 7mil	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	◆	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
8759573	–	1893064	8794828	1578194	1446830	Kodak Reverse Print Backlit Film / 6mil	(30.5 m / 100' rolls)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
8585788	- –	8500456	1918440	8836843	1568443	Kodak Premium White Film / 5mil	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
222760-00	–	222540-00	222541-00	222542-00	222543-00	Kodak Production Glossy Poly Poster Plus / 8mil••	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
222761-00	- –	222547-00	222548-00	222549-00	222550-00	Kodak Production Satin Poly Poster Plus / 8mil••	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
223207-00	- –	223208-00	223209-00	223210-00	223211-00	NEW Kodak Production Self-Adhesive Glossy Poly Poster Plus / 6mil	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
223212-00	- –	223213-00	223214-00	223215-00	223216-00	NEW Kodak Production Self-Adhesive Satin Poly Poster Plus / 6mil	(30.5 m / 100' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
						Coated Papers																							
8307878	1660661	1839208	8811721	8294498	8332199	Kodak Coated Matte Print Paper / 140g	(30.5 m / 100' rolls)	●	●	●	■	●	◆	◆	■	●	■	●	■	■	●	■	◆	■	●	■	●
1251057	8759268	1051028	8980096	8518615	–	Kodak Coated Matte Print Paper / 90g	(30.5 m / 100' rolls)	●	◆	●	◆	◆	◆	◆	■	●	■	●	■	■	●	◆	◆	■	●	■	●
1773167	- –	8330052	1920487	1937010	8078081	Kodak Self-Adhesive Coated Matte Print Paper / 100g	(30.5 m / 100' rolls)	●	●	●	■	●	◆	●	■	●	■	◆	■	■	●	■	●	■	●	■	●
						Vinyl & Banners																							
221625-00	- –	221621-00	221622-00	221623-00	221624-00	Kodak Water-Resistant Removable Vinyl / 6mil	(18.3 m / 60' rolls)	●	●	●	■	●	◆	●	■	●	■	●	●	●	●	■	●	●	●	■	●
1449925	- –	1757558	1329739	1378967	8868093	Kodak Water-Resistant Self-Adhesive Vinyl / 6mil	(12.2 m / 40' rolls)	●	●	●	■	●	◆	●	■	●	■	●	●	●	●	■	●	●	●	■	●
221619-00	- –	221615-00	221616-00	221617-00	221618-00	Kodak Water-Resistant Scrim Banner / 17mil	(12.2 m / 40' rolls)	●	●	●	■	●	◆	●	■	●	■	●	●	●	●	■	●	●	●	■	●
220065-00	- –	220061-00	220062-00	220063-00	220064-00	Kodak Water-Resistant Poly Poster Matte / 8mil	(30.5 m / 100' rolls)	●	●	●	■	●	◆	●	■	●	■	●	■	■	●	■	●	■	●	■	●
220071-00	- –	220067-00	220068-00	220069-00	220070-00	Kodak Water-Resistant Self-Adhesive Poly Poster Matte / 9mil	(30.5 m / 100' rolls)	●	●	●	■	●	◆	●	■	●	■	●	■	■	●	■	●	■	●	■	●
223217-00	- –	223218-00	223219-00	223220-00	223221-00	NEW Kodak Production Removable Glossy Vinyl / 6mil	(18.3 m / 60' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
223222-00	- –	223223-00	223224-00	223225-00	223226-00	NEW Kodak Production Removable Satin Vinyl / 6mil	(18.3 m / 60' rolls)	●	◆	●	●	◆	●	◆	●	●	●	◆	◆	◆	◆	●	◆	◆	◆	◆	◆
						Canvas																							
8936924	8684219	8559908	1074350	1031558	–	Kodak Artists' Semi-Gloss Canvas / 20mil	(10.7 m / 35' rolls)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
8955445	- –	8848376	1818715	8979593	–	Kodak Matte Canvas / 19mil	(12.2 m / 40' rolls)	●	●	●	■	●	◆	●	■	●	■	●	■	■	●	■	●	■	●	■	●
								Thermal							Thermal		Thermal		Piezo		Thermal		Piezo		Piezo				

*Product availability varies by region.
**Poly Poster Plus Media is also available in 36" (91.4 cm) / 200' (61 m) rolls - Glossy (222545-00) & Satin (222552-00)
†Premium Rapid Dry / 260g media is also available in 8.5"x11" cut sheet - Glossy (8720088) & Lustre (8465742) & 13"x19" cut sheet - Glossy (1216274) & Lustre (1598689) and 17" (43.2 cm)/100' (30.5 m) rolls - Glossy (1714344) & Lustre (8701518) & 17" (43.2 cm) x 16.4' (5 m) rolls - Glossy (8628547) & Lustre (8711616)

● Recommended for all applications
■ Recommended for all applications when laminated/overcoated
◆ Not recommended