VersaSTUDIO

BY-20 DTF System

Master Sales Guide

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Introduction

The Next-Generation VersaSTUDIO BY-20 Desktop Direct-to-Film Printer

Introducing the VersaSTUDIO BY-20, the ultimate desktop direct-to-film printer… and more. With simplicity at its core, this printer is a beacon of reliability and efficiency, transforming apparel and accessory decoration into a quick and easy process for everyone from entry-level print practitioners to seasoned professionals. Beyond its capabilities as a DTF printer, the BY-20 boasts integrated contour-cutting functionality, allowing users to create print and cut heat transfer graphics – all with a single, compact, and affordable device.

The VersaSTUDIO BY-20 redefines what's achievable in direct-to-film printing, catering to diverse user needs while offering unparalleled ease of use, versatility, and productivity. A complete "design to print" solution that can be paired up with an automated in-line shaker and dryer unit for an automated roll-to-roll workflow.

What You Need to Know

Part of the VersaSTUDIO family of products – advanced desktop devices designed to the meet the needs of small businesses, retailers, and educators – emerges the groundbreaking BY-20, a Direct-To-Film (DTF) printer that's poised to redefine the landscape of apparel decoration.

Designed as the quintessential starting point for those venturing into DTF apparel decoration, the BY-20 embraces innovation that's reshaping the apparel market. Its compact design and user-friendly interface serve as a welcoming gateway into the world of professional-grade printing, ensuring a seamless experience for beginners and seasoned users alike.

The BY-20 isn't just about ease of use; it’s also engineered to significantly increase productivity. Boasting the ability to double productivity compared to previous models, this compact, powerful printer doesn't compromise efficiency for simplicity. Additionally, it comes with bundled with feature-filled software that’s equally powerful and intuitive. This software makes installing, setting up and using the BY-20 exceptionally easy, especially for less experienced users.

One of the key features that sets the BY-20 apart from competitive devices is that it can be easily integrated with popular DTF powder shaker and heater units, allowing for an automated, hassle-free system. This pairing helps streamline workflow and maximize productivity, ensuring that users can focus on creativity and production, rather than grappling with complex set-up or operation.

With its starter price and comprehensive suite of features, the VersaSTUDIO BY-20 sets a new standard for accessibility in the space of professional-grade DTF printers. It's more than a device; it's a catalyst for innovation and efficiency, catering to the diverse needs of small businesses, retailers, and educators seeking a reliable, user-friendly solution.

Pricing

- **BY-20 (CMYK + WH) - $8,495 USD (MSRP)**
- **S-PG CMYK - $57.99 USD (MSRP)**
- **S-PG-WH (White ink for BY-20) $66.99 USD (MSRP)**
- **Includes powerful, user-friendly Roland DG VersaWorks® 6 RIP software at no additional cost**
- **Compatible with Roland DG Connect print operation app**
- **Includes FlexiDESIGNER VersaSTUDIO Edition at no additional cost**

Warranty Information

- One-Year Trouble-Free Warranty.
- Warranty extensions available for up to three total years of coverage.
- Also, once you register, you qualify for a variety of benefits such as free online training and phone support.

Target Markets

Primary Target: First-Time Users

- New DTF users or those using slightly modified DTF machines.
- Individuals exploring DTF for starting a new business venture.
- Users unhappy with third-party solutions (modified machines) seeking better options.

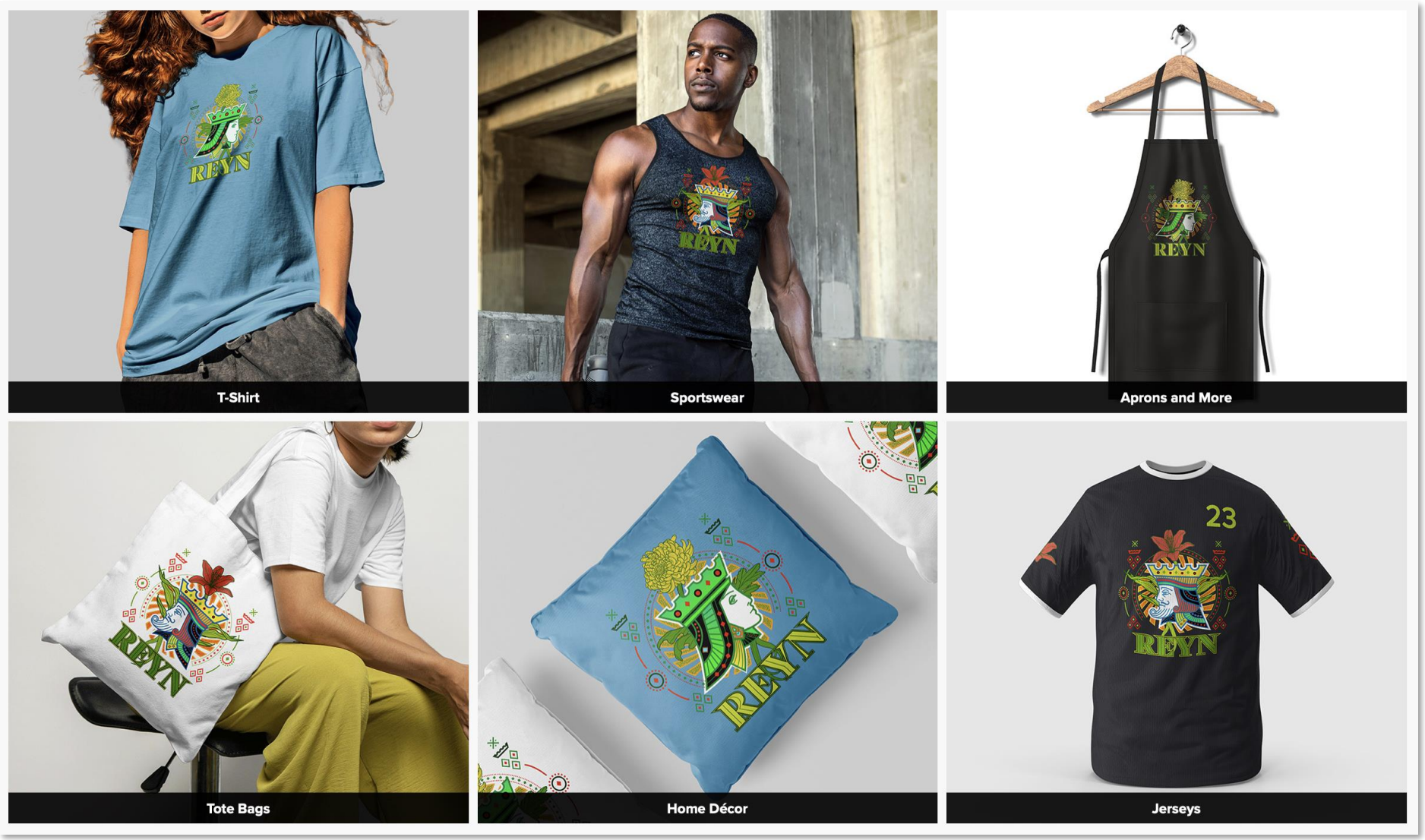
Secondary Target: Upgrading Users

- Existing BN-20, BN-20A, and GS-24 garment users looking for replacements or add-on options for their current setup
- Screen print, embroidery, and sublimation users looking to add reliable short run capabilities

Key Customer Types

- Small Businesses
- Home-Based Businesses
- Apparel Decorators
- Educators
- Graphic Designers
- Makers

Popular Applications



Product Features

RELIABILITY

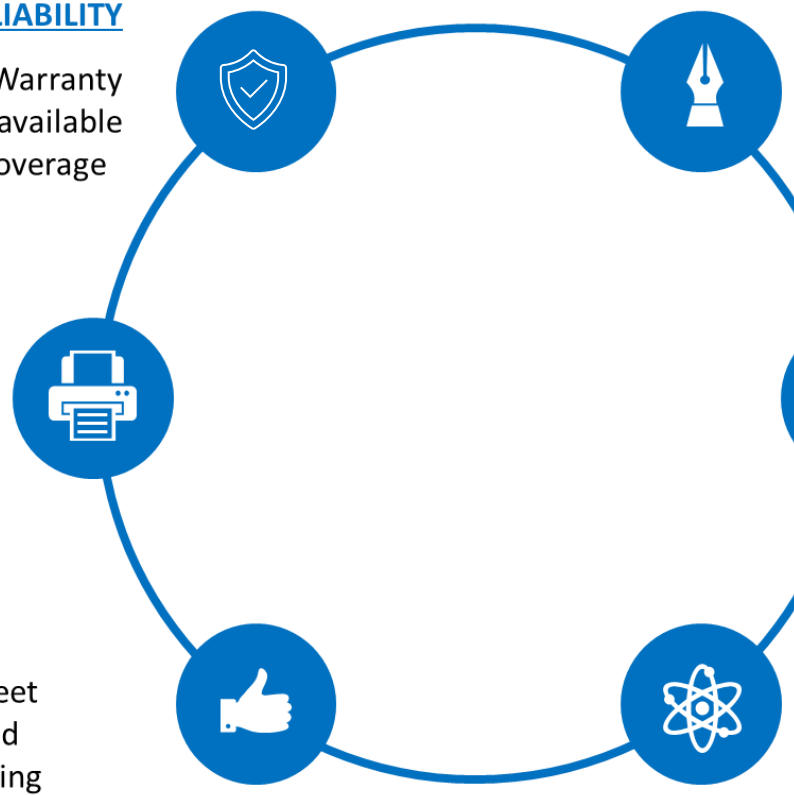
Roland Care 1-Year Trouble-Free Warranty included. Warranty Extensions available for a total of 3 Years of coverage

SMALL-FOOTPRINT PRODUCT

The BY-20 requires a small-footprint/workspace and only requires frontal access for operation

EASY OPERATION

Same usability as BN2 series. Sheet cutting function with a perforated option allows for easy post-printing process.



VERSATILITY

Equipped with a Print & Cut function.
It supports not only DTF but also heat transfer vinyl and other hybrid applications, expanding customers range of product offerings.

PRODUCTIVITY

Twice the productivity compared to the BN-20D.
CMYK>WH single pass printing is available

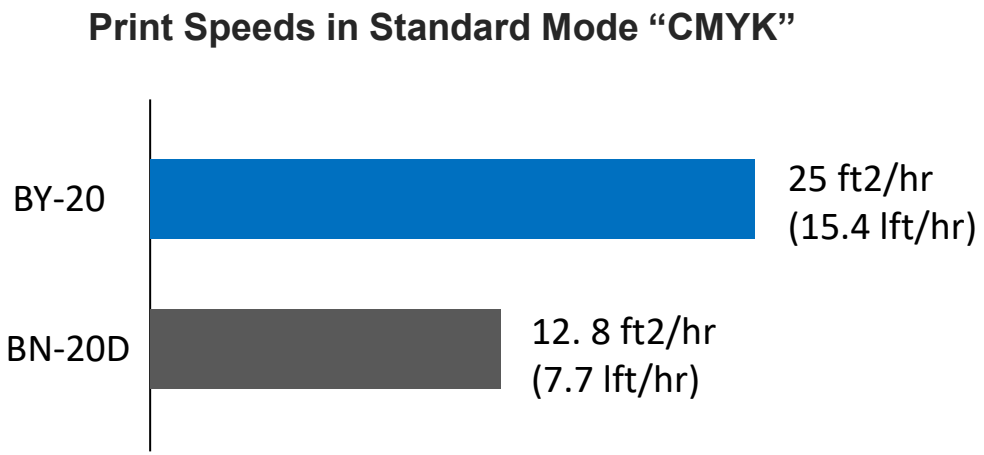
HIGH WHITE DENSITY

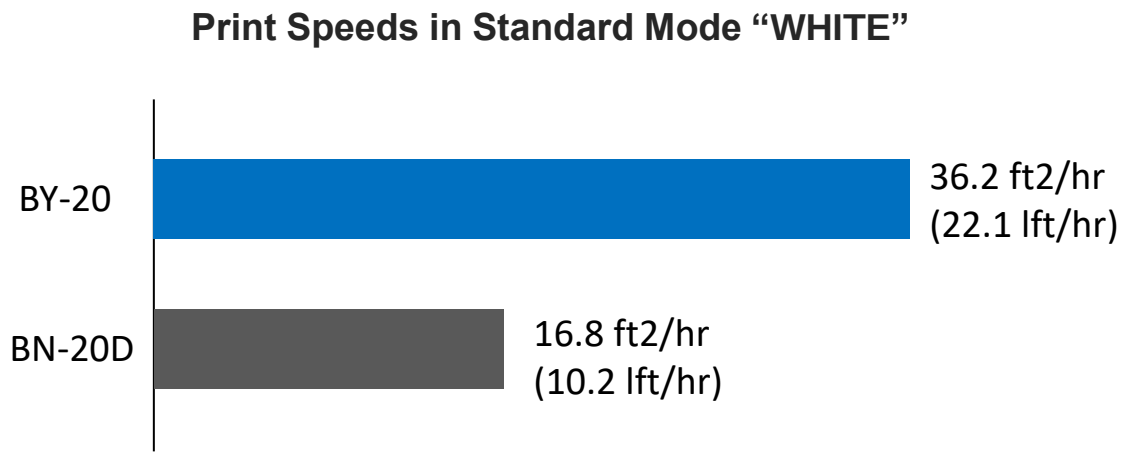
Provide print modes with high density white for dark garments.

Product Features

Improved Productivity

Enhanced print speeds up to twice as fast as our previous model empower users to effortlessly complete short-run jobs within the same day. The introduction of the CMYK+WH mode not only elevates printing capabilities, but also enables seamless integration of the BY-20 with widely-used automated shaker and dryer systems. This integration transforms the BY-20 into a powerful roll-to-roll system, ideal for handling production-level jobs with the utmost efficiency.



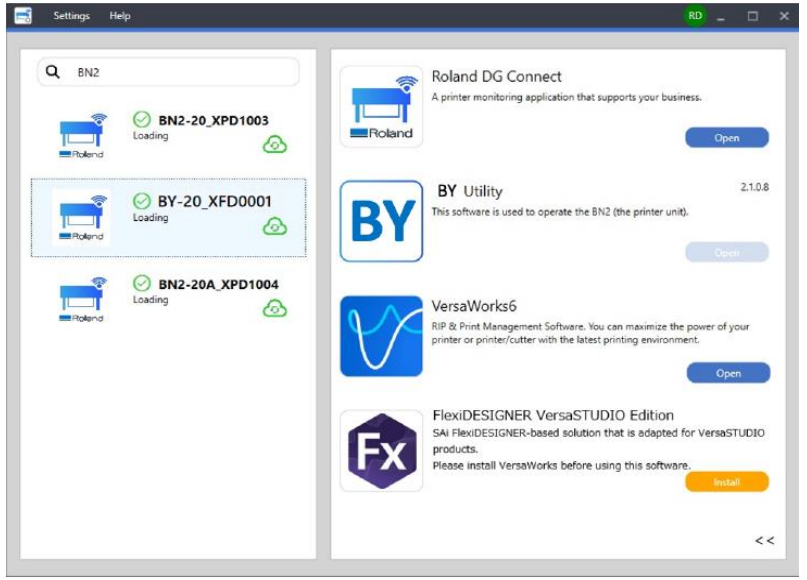


Product Features

Easy Operation – New Utility Interface

The BY-20 printer's innovative utility interface allows for a user-friendly printing experience. Say goodbye to complexity and embrace intuitive operation that enhances visibility, improves accessibility, and puts all the essential tools at your fingertips.

The BY-20 utility displays important information, such as remaining ink levels, job names with thumbnails, and estimated print times during output. This real-time insight ensures proactive management and helps users make informed decisions for optimized production.



Product Features

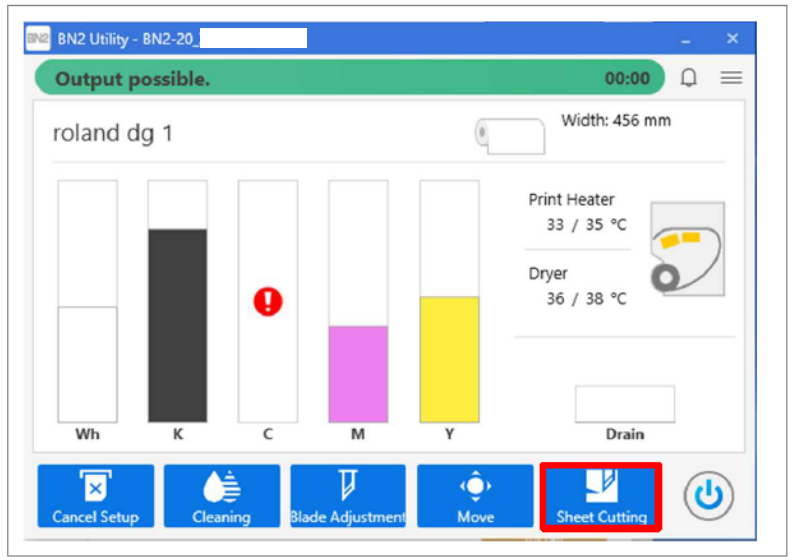
Easy Operation – Sheet Cut

Experience a new level of convenience with the BY-20 and its advanced "Sheet Cut Function," which eliminates the need for manual sheet cutting, simplifying and streamlining the post-production process on your completed jobs

You can set up unattended print and cut jobs using the sheet cut feature. This minimizes manual interference between jobs, allowing for improved overall productivity, quick turnaround times, and increased profit margins.

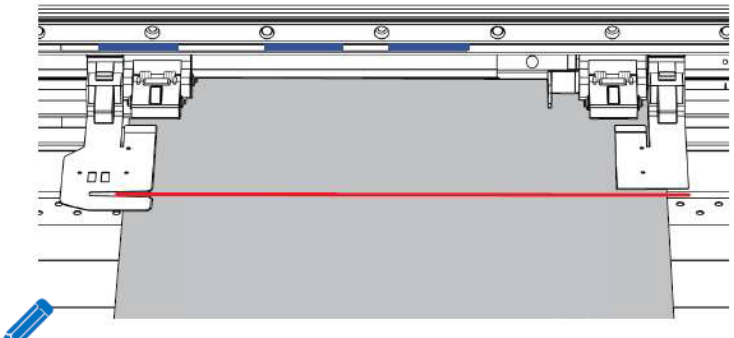
Step 1

Click Sheet Cutting



Step 2

Perform Sheet Cut

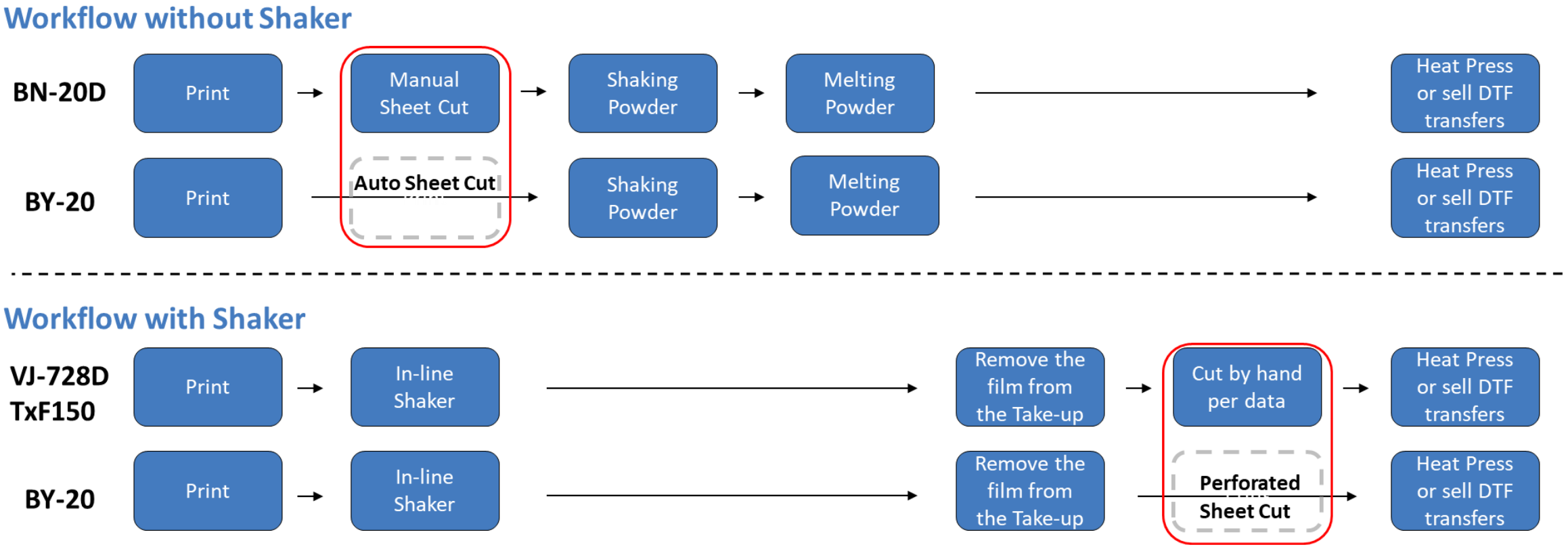


The media is separated at the position shown in the red figure above. The notch position of the left media clamp is a mark. Customers do not need to remove the media clamp during the sheet cut operation.

Product Features

Easy Operation

The Roland DG VersaSTUDIO BY-20 offers two distinct workflows for generating transfers. The first involves a traditional manual process where the S-Powder is applied to the printed graphic, followed by hand curing using a press or oven. Alternatively, for longer and more production-focused runs, the automated roll-to-roll workflow is utilized. In this method, powdering and curing are efficiently handled using an automated shaker and dryer system. Notably, both workflows are enhanced compared to competitor models due to the integration of the "Automated Sheet Cut Function." This feature eliminates the need for manual trimming of each transfer or gang sheet after production, expediting the entire process.

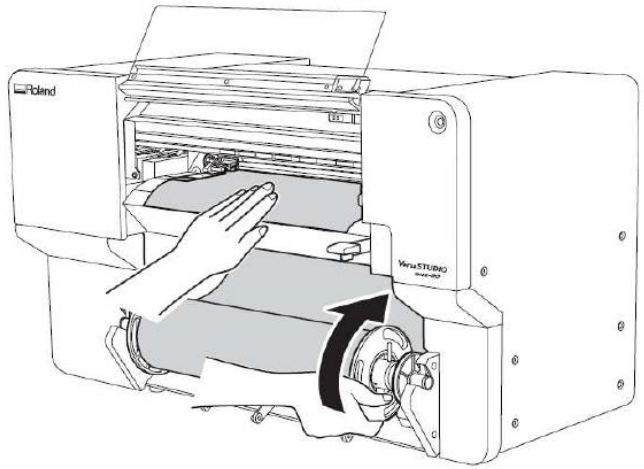


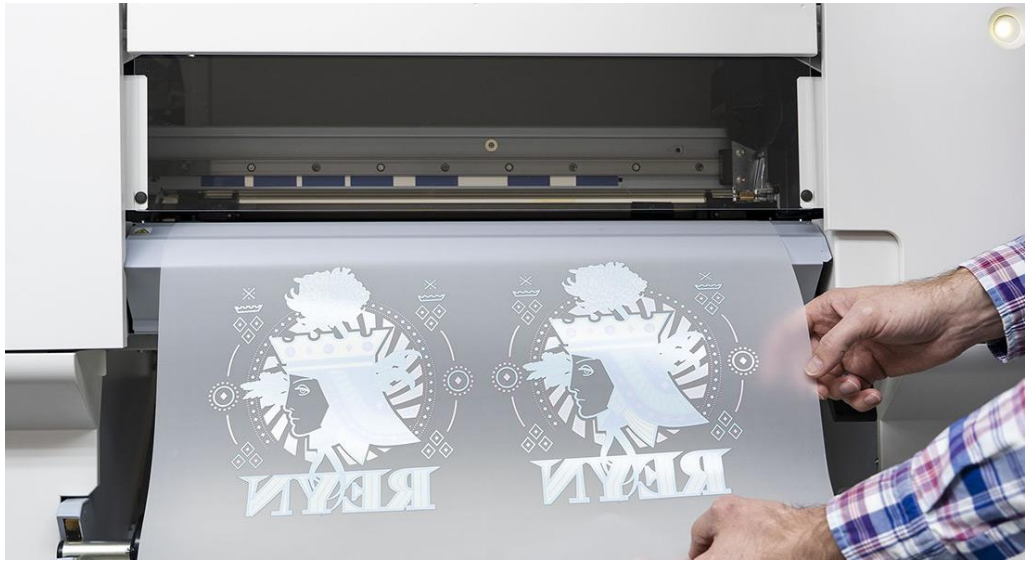
Product Features

Easy Operation – Front Loading Ink & Media

Transform the way you work with the BY-20’s revolutionary front-loading design. This simplifies media setup and maintenance by allowing these operations to take place at the front of the printer, saving time and effort.

Gone are the days of having to access the back of the printer for loading media or performing maintenance tasks. This convenient, front-focused approach ensures that every task is within arm's reach for a smooth, efficient workflow.

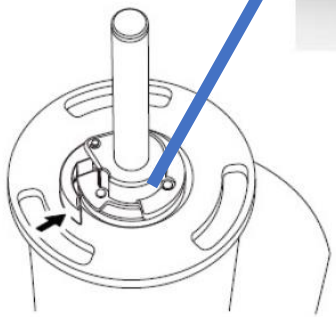




Product Features

New Media Holder Design

The BY-20 includes an innovative new media holder designed to make media setup easier than ever. This holder employs the same user-friendly locking mechanism as Roland DG's TrueVIS VG3 wide-format printer/cutters, allowing users to lock in media with a single touch. It's an enhancement that streamlines operation, reduces setup time, and ensures a hassle-free experience, enabling users to achieve remarkable results without unnecessary complexity.



Closing the lock lever in the direction of the arrow secures the media flange easily.

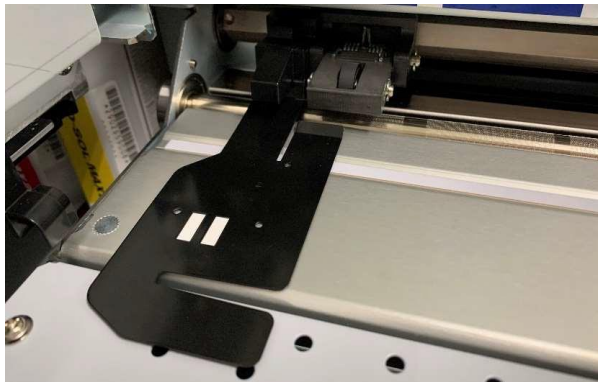
Product Features

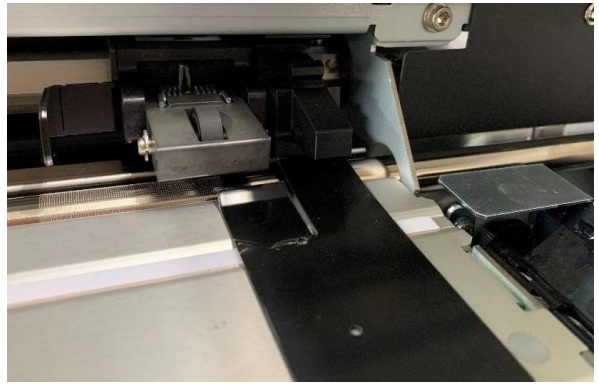
Easy Operation – New Media Clamp and Pinch Roller Design

The BY-20 is also designed for optimum media handling efficiency and precision. Media clamps and pinch rollers are thoughtfully separated, allowing for better control and placement to accommodate different media types and widths.

Easily identify grit roller sections where pinch rollers can be placed by using the new blue indicators above the platen. These upgrades to the new BY-20 are a direct reflection of the voice of our customers.

Pinch Roller and Media Clamp System





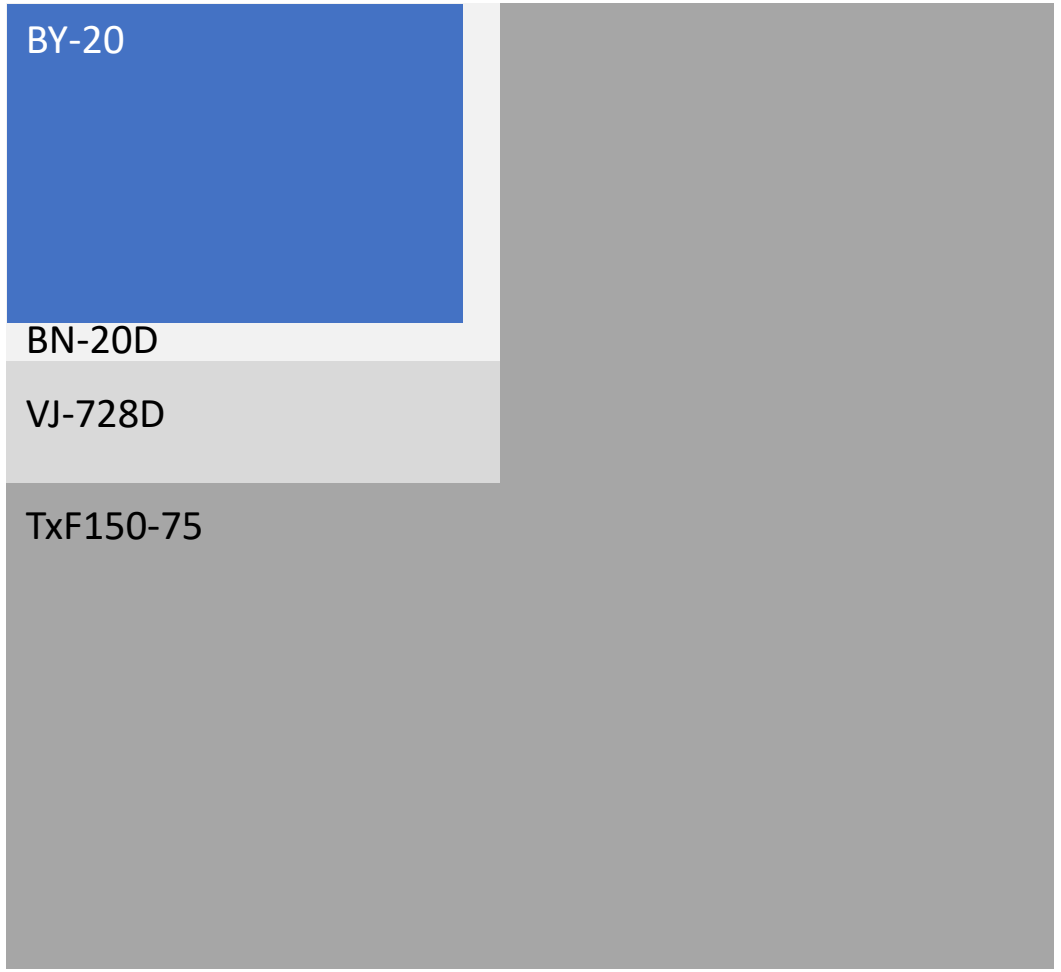
Product Features

Small Footprint

Thanks to the adoption of a front-loading structure and internal ink cartridge storage, the VersaSTUDIO BY-20 requires an installation space that is approximately 20% smaller than its predecessor, despite being twice as tall. This smart design ensures that your workspace remains clutter-free and focused on what truly matters: creating exceptional output.

The BY-20 redefines what it means to be efficient and space-conscious. With a small-footprint design that doesn't compromise on performance, your customers can enjoy a workspace that's optimized for creativity and productivity. Built to fit easily on just about any desktop, the BY-20 will allow businesses with limited space to access a world of professional-grade printing.

Model	Installation Space
BY-20	W 50.8 in x D 34.8 in.
BN-20D	W 55.2 in. x D 39.4 in.
Mutoh/STS-VJ-728D	W 54.7 in x D 52.6 in.
TxF150-75	W 116.7 in x D 106.2 in.



Product Features

Easy Operation – Multi-Sensor Adjustment

The BY-20 introduces a new, groundbreaking “Multi-Sensor Adjustment," a feature that revolutionizes print quality by automatically fine-tuning printer settings based on media type and thickness. This one-touch solution eliminates the guesswork, enabling users to consistently achieve professional-level results.

The automated calibrations performed eliminate the complexities of manual adjustments. Now, outstanding image quality can be achieved without requiring intricate setup. Whether it's thin or thick media, the BY-20 ensures optimal conditions, making it simple for anyone to produce stunning, high-quality prints.

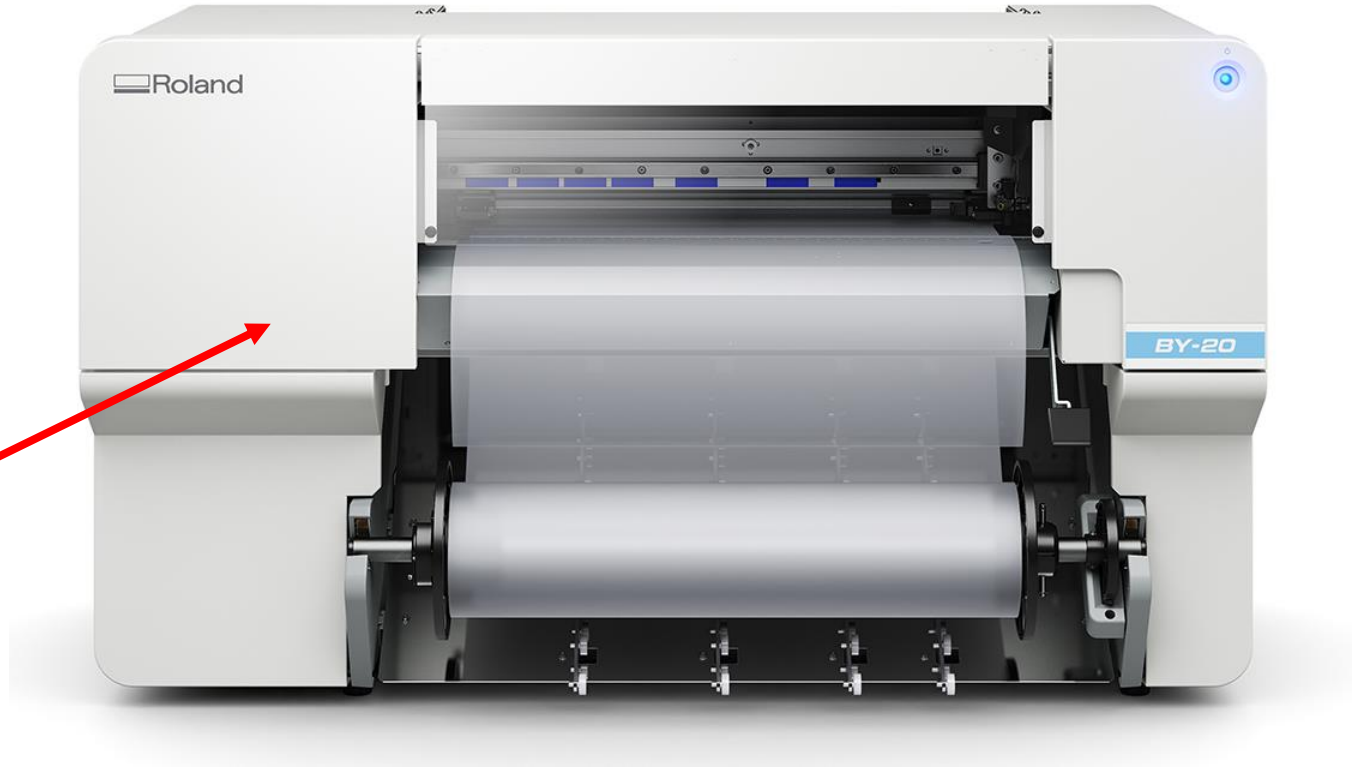
Items	Automatic Adjustment	Manual Adjustment
Adjustment Time*	Approximately **4.5 min**	Approximately **3.5 min**
Adjustment Print Range	Approximately **300mm x 105mm**	Approximately **340 mm x 90mm**
Test Pattern For M-GAP		
Test Pattern For Calibration		

* Adjustment times include both printing and adjustment times.

Product Features

Integrated Storage Solution

The BY-20 DTF printer is equipped with a convenient front-access “Tool Storage Space,” that provides users with an integrated storage solution within the device. Now, small items and accessories can be easily stored and accessed. By keeping essential tools and accessories close at hand, this useful feature helps enhance efficiency and minimize downtime.

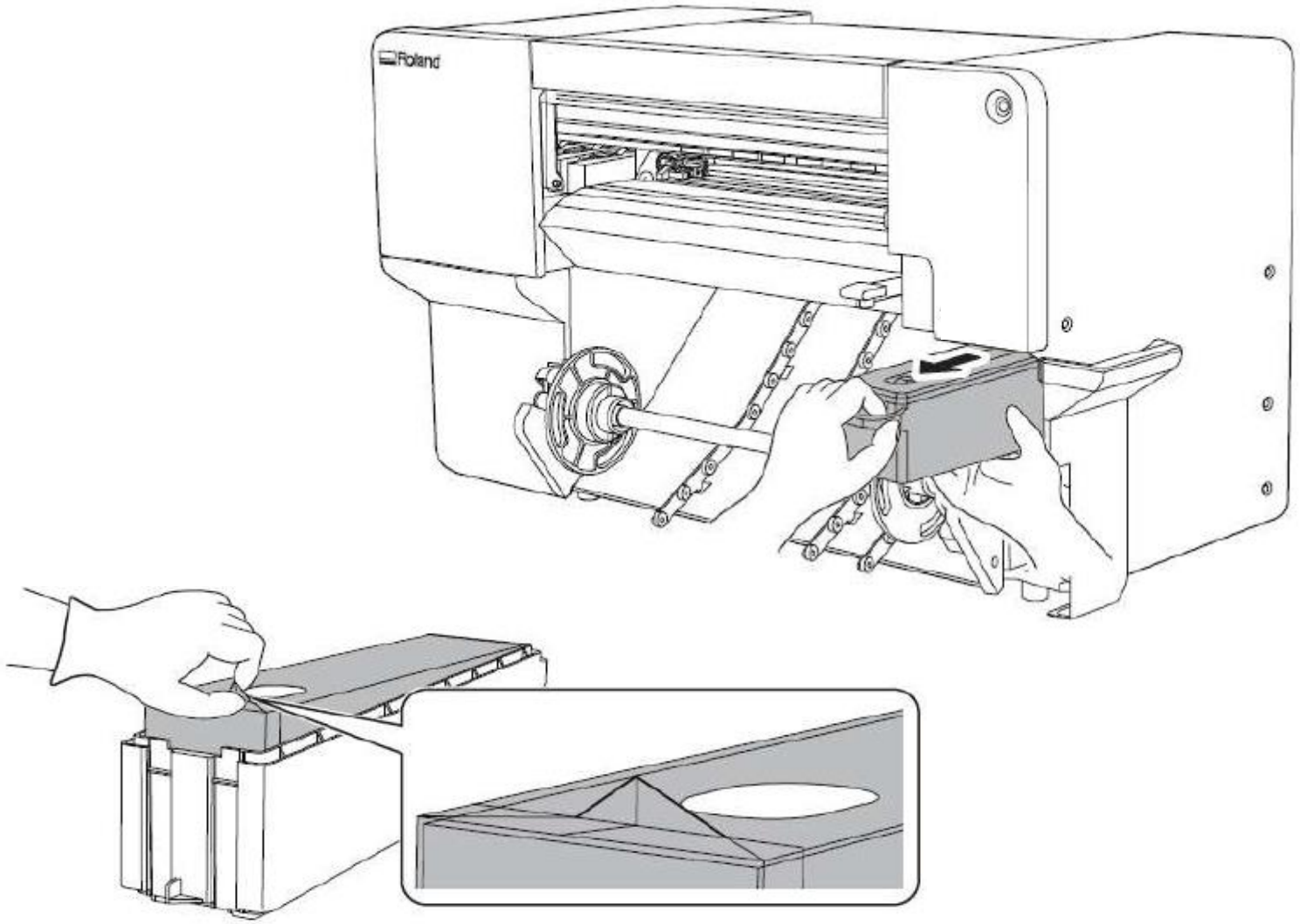


Product Features

New Drain Tank

The BY-20 isn't just designed for exceptional printing, it's also uniquely engineered to reduce waste and minimize costs. A prime example is this state-of-the-art printer's new and innovative waste drain tank for an eco-friendly approach to ink management.

This advancement helps eliminate unnecessary expenses by enabling users to manage their running costs more efficiently. By utilizing a high-capacity 1.8L waste liquid pack, only the inner package of the drain cartridge needs to be replaced, resulting in cost savings without compromising on quality.



Only the contents of the drain ink cartridge need to be replaced. The drain cartridge is reusable.

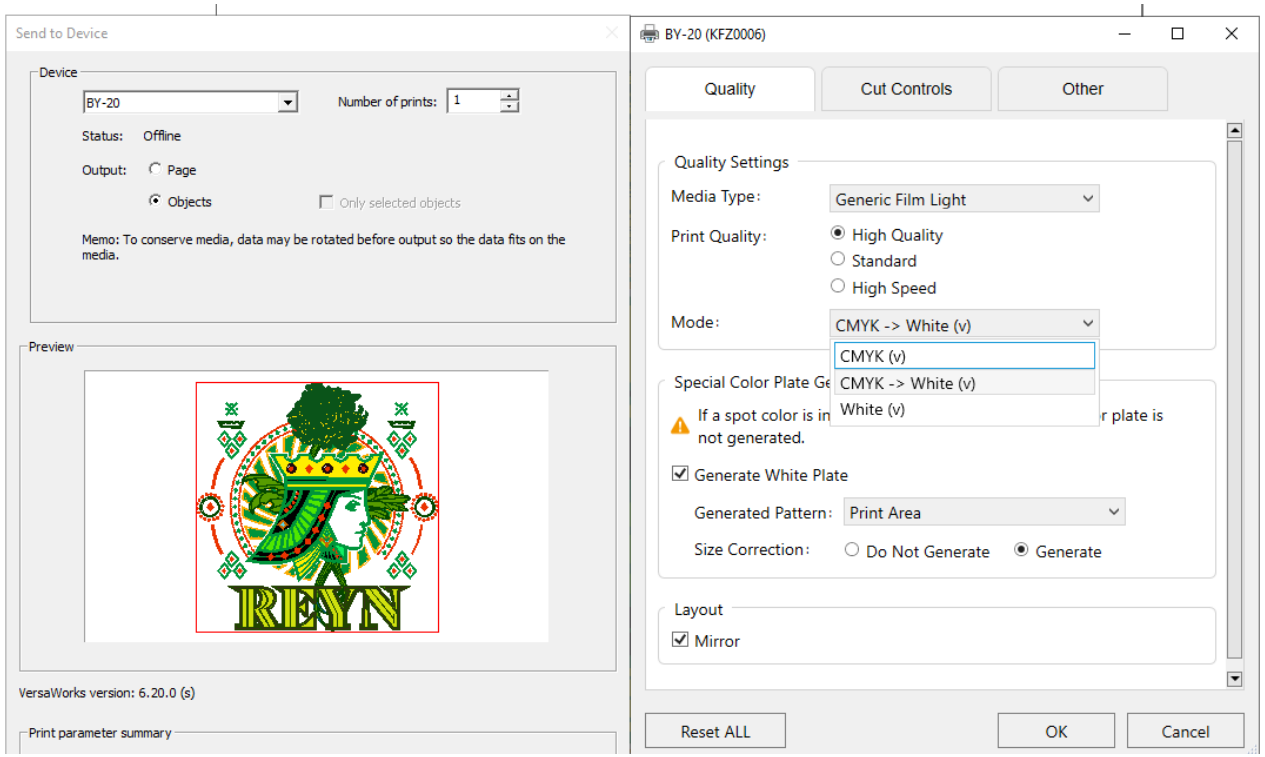
Product Features

Included FlexiDESIGNER VersaSTUDIO Edition Software

Empower your customers' creative potential with the BY-20, equipped with the robust FlexiDESIGNER VersaSTUDIO Edition design and output software. Tailored to unlock design skills, this bundled software ensures that even novices can start creating and printing captivating graphics immediately after their BY-20 purchase.

Efficiency lies at the heart of the FlexiDESIGNER VersaSTUDIO Edition software. Its intuitive interface simplifies the DTF workflow, streamlining the process from design inception to final output. With a suite of tools dedicated to boosting productivity, your customers can effortlessly achieve exceptional results.

The software’s White Layer Creation and Auto Mirroring functions significantly simplify the design of DTF transfers, ensuring a seamless and user-friendly experience for your customers.



Product Features

Roland DG VersaWorks 6

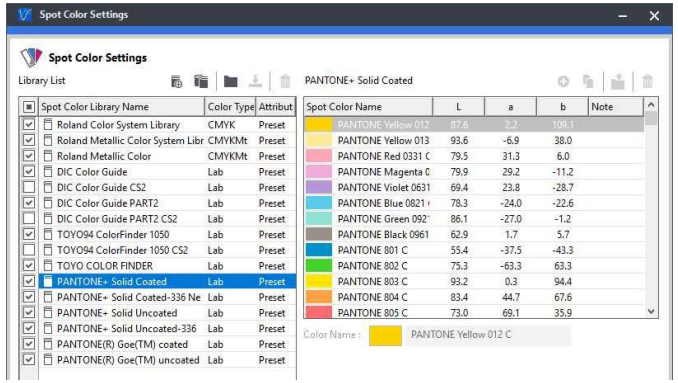
Roland DG VersaWorks® has earned a reputation for being the world's most user-friendly and feature-packed RIP software. Incorporating the HARLEQUIN RIP dual-core engine and other innovative features, VersaWorks 6 offers quick RIP speeds as well the ability to handle and correctly process complex PDF, EPS, and PS files with drop shadows and transparencies.

VersaWorks 6 includes a modern, intuitive interface. Simply drag and drop files from the desktop, or other folder locations, into the printer queue for processing. The icon-based RIP experience allows quick access to powerful tools for layout, quality and color management settings, easy nesting operations, and advanced job management.

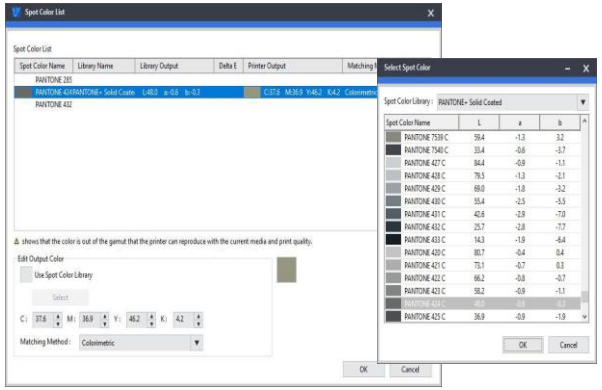
Powerful Color Control

VersaWorks 6 supports comprehensive color libraries, including Roland Color System and PANTONE® libraries, giving you detailed spot color matching and automated color matching of logos and other design elements. VersaWorks 6 also allows for in-RIP spot color replacement on the fly, making color replacement as simple as a few clicks of the mouse. This is especially useful when duplicating targeted brand and sports logo colors for apparel.

PANTONE Library and Roland Color System



Spot Color Replacement



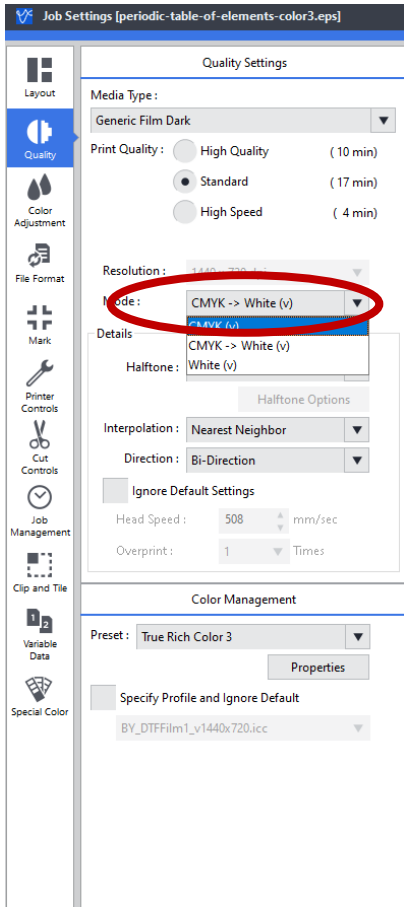
Product Features

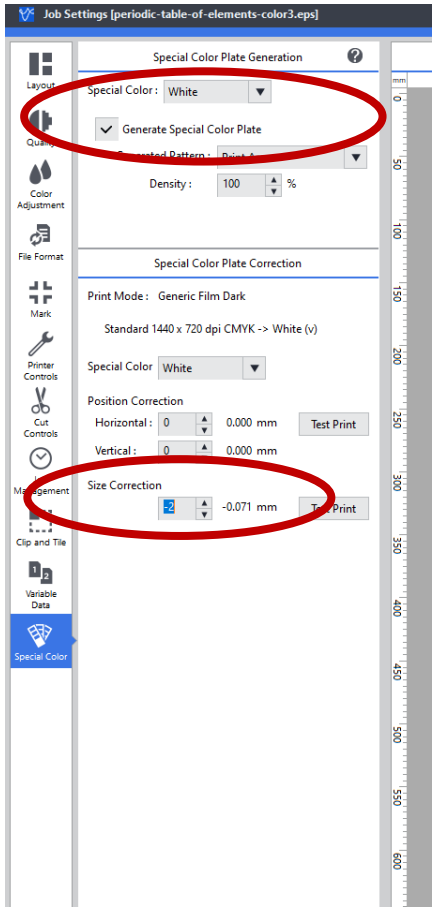
Roland DG VersaWorks 6

Roland DG VersaWorks provides robust support for the BY-20's single-pass mode, enabling the creation of CMYK+WH graphics. Users have the flexibility to bypass the FlexiDESIGNER workflow, making it easy to access advanced features and tailor the workflow to suit the specific application and job size.

The pixel replace mode “Special Plate Generation” within VersaWorks automates the generation of the White Layer, simplifying the layering process significantly. Moreover, size correction tools ensure precise layer alignment between CMYK and White, ensuring accuracy in graphic output.

Utilizing the CMYK+W mode, the BY-20 seamlessly integrates with various popular automated shaker and dryer units, expanding its compatibility and enhancing workflow efficiency.





Product Features

Roland DG Connect

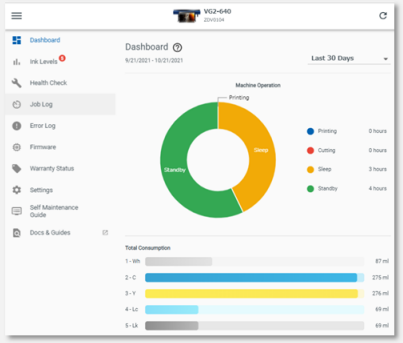
The Roland DG Connect App offers more than just control – it offers understanding. DG Connect allows you to gain a detailed view of your entire print operation, providing insights that enhance decision-making and drive efficiency. You'll be able to monitor your device's performance in real-time, empowering you to stay on top of your workflow like never before.

This innovative app also unlocks a new level of operational efficiency with Roland DGA Authorized Dealers and Service Engineers. The comprehensive machine insights that Roland DG Connect provides help ensure that customers' devices maintain optimal performance, avoiding disruptions caused by missed maintenance.

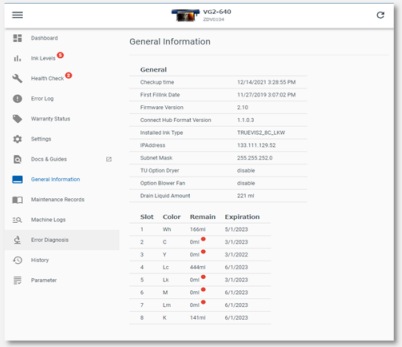
Roland DG Connect

for Everything Creative

BY Customers' View



Dealers' View



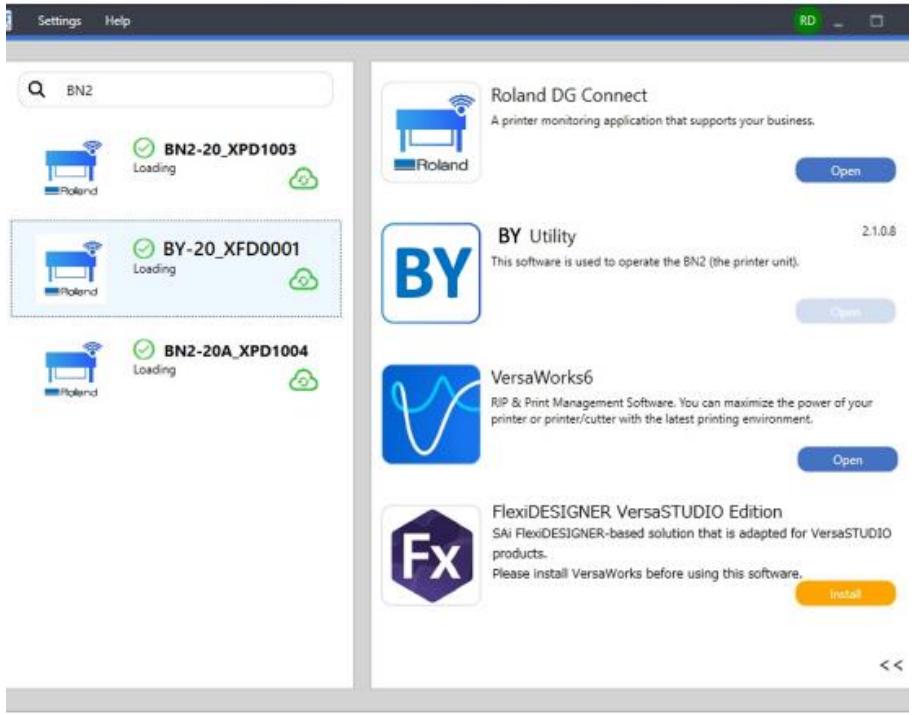
Roland DG Connect provides valuable services based on machine data.

Product Features

Roland DG Connect Hub

Experience a new level of convenience with Roland DG Connect Hub, where customers can access all necessary software with ease. Software downloads become simpler and more efficient, empowering users to focus on what truly matters: creating exceptional output.

The Roland DG Connect Hub App is your partner in creativity and efficiency. From gaining insights into your print operation to optimizing device performance and minimizing downtime, this app is designed to empower users.



Software	Supported Language
Roland DG Connect	English/French/German/Italian/Spanish/ Korean/Portuguese/Japanese
Utility	English/French/German/Italian/Spanish/ /Portuguese/Japanese
VersaWorks	English/French/German/Italian/Spanish/ Simplified Chinese/Chinese/Korean/ Portuguese/Russian/Turkish/Arabic/ Japanese
FlexiDESIGNER VersaSTUDIO Edition	English/French/German/Italian/Spanish/ Simplified Chinese/Chinese/Korean/ Portuguese/Russian/Japanese

Print Speed

Media	Print Mode	Mode	Resolution (dpi)		Pass	Direction	Scan Speed (mm/s)	Print Speeds	
			Scan	Feed				ft2/hr	lm/hr
Generic Film Dark* Generic Film Light*	**High Quality**	CMYK	1,440	720	16	Uni	508	12.2	2.26
		CMYK>White	1,440	720	16	Uni	508	3.01	0.56
		White	1,440	720	16	Bi	508	19.6	3.64
	Standard	CMYK	1,440	720	12	BI	508	25.2	4.68
		CMYK>White	1,440	720	12	Bi	508	6.67	1.24
		White	1,440	720	8	Bi	508	36.3	6.74
	High Speed	CMYK	1,440	720	10	BI	508	29.7	5.52
		CMYK>White	1,440	720	10	Bi	508	11.9	2.22
		White	1,440	720	6	Bi	508	46.4	8.62

Ink Consumption

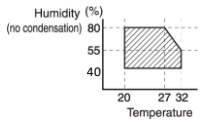
Print Mode					Ink Consumption (ml)		
Profile	Quality	Color	Resolution	Pass	N5A (CMYK)	N2A (CMYK)	White
Generic Film Dark/Light	**High Quality**	**CMYK**	**1,440 x 720**	**16**	**0.61/0.54**	**0.31/0.31**	**-**
		CMYK>White	**1,440 x 720**	**16**	**0.61/0.54**	**0.31/0.31**	**4.16/1.44**
		White	**1,440 x 720**	**16**	**-**	**-**	**4.16/1.44**
	Standard	**CMYK**	**1,440 x 720**	**12**	**0.61/0.54**	**0.31/0.31**	**-**
		CMYK>White	**1,440 x 720**	**12**	**0.61/0.54**	**0.31/0.31**	**4.16/1.44**
		White	**1,440 x 720**	**8**	**-**	**-**	**3.85/1.54**
	High Speed	**CMYK**	**1,440x720**	**10**	**0.61/0.54**	**0.31/0.31**	**-**
		CMYK>White	**1,440 x 720**	**10**	**0.61/0.54**	**0.31/0.31**	**4.16/1.44**
		White	**1,440 x 720**	**6**	**-**	**-**	**3.85/1.54**

Data: ISO N5A
Size: A4 Size
(8.3” x 11.7”)
Color Settings:
True Rich Color 3

Data: ISO N2A
Size: A4 Size
(8.3” x 11.7”)
Color Settings:
True Rich Color 3

Data: White Solid Color
Size: A4 Size
(8.3” x 11.7”)
Color Settings:
True Rich Color 3

Specifications

		BY-20
Printing method		Piezo ink-jet method
Media	Width	5.91 to 20.2 in
	Thickness	Maximum 1.0 mm (39.3 mil) with liner, for printing Maximum 0.4 mm (15.7 mil) with liner and 0.22 mm (8.6 mil) without liner, for cutting
	Roll outer diameter	Maximum 150 mm (5.9 in.)
	Roll weight	Maximum 6 kg (13.2 lb.)
	Core diameter	76.2 mm (3 in.) or 50.8 mm (2 in.)
Printing/cutting width (*1)		Maximum 480 mm (18.89 in.)
Ink	Type	220 ml cartridge
	Colors	cyan, magenta, yellow, black, white
Printing resolution (dots per inch)		Maximum 1,440 dpi
Cutting speed		10 to 150 mm/s (0.39 to 5.9 in/s)
Blade force (*2)		30 to 500 gf
Blade	Type	Roland CAMM-1 series blade
	Offset	0.000 to 1.500 mm (0.0 to 59 mil)
Software resolution (when cutting)		0.025 mm/step (0.98 mil/step)
Media heating system (*3)		Print heater set temperature: 30 to 35 °C (86 to 95 °F) Dryer set temperature: 30 to 38 °C (86 to 100.4 °F)
Connectivity		Ethernet (100BASE-TX/1000BASE-T, automatic switching)
Power-saving function		Automatic sleep feature
Rated input		100-240 Va.c. 50/60 Hz 2.1 A
Power consumption	During operation	Approx. 185 W
	Sleep mode	Approx. 27W
Acoustic noise level	During operation	62 dB (A) or less
	During standby	60 dB (A) or less
Dimensions (Width x Depth x Height)		1,069 mm × 617 mm × 622 mm (42.1 in. × 24.3 in. × 24.5 in.)
Weight		62 kg (137 lb.)
Environment	During operation (*4)	Temperature: 20 to 32 °C (68 to 89.6 °F), humidity: 40 to 80 % RH (no condensation)
	Not operating	Temperature: 5 to 40 °C (41 to 104 °F), Humidity: 20 to 80 % RH (no condensation)
Included items		Dedicated stands, power cord, Media take-up unit, media holders, replacement blade for separating knife, User's Manual, Software(FlexiDESIGNER VersaSTUDIO Edition、VersaWorks, Roland DG Connect), etc.
	*1	The length of printing or cutting is subject to the limitations of the program.
	*2	• 500 gf is the maximum instantaneous blade force. • The blade force must be adjusted according to details such as the media thickness.
	*3	• Warm-up is required after power up. This may require 5 to 20 minutes, depending on the operating
	*4	• Operating environment (Use in an operating environment within this range.) 

תודה
Dankie
Gracias
Спасибо
شكراً
Merci
Takk
Köszönjük
Terima kasih
Grazie
Dziękujemy
Dėkojame
Ďakujeme
Vielen Dank
Paldies
Kiitos
Täname teid
谢谢
Thank You
Tak
感謝您
Obrigado
Teşekkür Ederiz
감사합니다
Σας Ευχαριστούμ
ขอบคุณ
Bedankt
Děkujeme vám
ありがとうございます
Tack