UV·53 DTS

Direct Color Systems®

Introducing the All New... UV-53DTS

UV·53 DTS / Direct Color Systems®

High-Performance Industrial Printer

UV-53 Industrial Inkjet Printer

Introducing the all-new UV-53DTS industrial UV/LED flatbed printer! We created a truly unique medium format flatbed printer capable of printing our patented ADA/Braille signage, Textur3D dimensional signage, and standard graphics.

The 5' x 3' design allows users to use quarter sheet stock and advantage of the increased efficiency of the 5' bed width. Our engineering team built the UV-53DTS around Ricoh Gen6 printheads with a faster firing frequency and smaller drop size for better apparent resolution. With a host of other options like pin registration and a printhead crash detection system, the UV-53DTS is ready to revolutionize your business!

Patented ADA/Braille Technology

New Size, High Quality Prints

Higher Productivity at a Competitive Price

> 4 Ricoh Gen6 Printheads

> Four color printing plus white and clear

> ADApt G5 specially formulated inks

> Capable of printing high-speed and high precision at 1200 dpi

> Pin Registration System for fast and easy alignment

> Precision dot placement provides sharper text and graphics

> Variable drop grayscale technology allows for smoother gradients and less ink usage

> Spend less time refilling the bulk ink system with large-capacity ink bottles (1L)

> Crash Detect System helps to reduce the chance of costly head strikes

Precision Printing & Production

> Multiple vacuum zones for different size substrates for maximum holding power

> Heavy-duty vacuum pump keep media in place for accurate dot placement

> Easy-to-adjust leveling system

> Y-Axis positioning accuracy of ± 0.0015" | 0.0381mm

> Specially formulated UV LED inks that were created for the UV-53DTS for precise jetting

> Pin registration for fast and easy alignment of media

Multiple Applications

> 4" | 10cm Print Height

> Color Byte 11 with ADA Software and TEXTUR3D Software to help create high margin signage

> Dual variable control LED lights with 6W/CM2 power output with instant on/off feature

> 10 pounds per square foot | 50kg per square meter of substrate weight

> ADA/Braille, Point of Purchase, Labels, Tags, Promotional items, Packaging, Retail, Wayfinding, Home Décor, Wood, and many more

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Technical Specifications

Imaging Process	On-Demand Piezo Inkjet Printheads
Printheads	Ricoh Gen6
Ink Droplet Size	Variable Grayscale Technology
Resolution[1]	Minimum 600dpi; Maximum 1200dpi
Ink	ADApt G5 UV LED Ink in Cyan, Magenta, Yellow, Black, White, and Clear, 1L bottles
Ink Delivery System	Bulk Ink system with 3L direct pour ink tanks
Print Speed[2]	ADA – 7 sq ft/hr	0.65 sq m/hr; TEXTUR3D 15 sq ft/hr	1.39 sq m/hr; Graphics – Quality Mode 168 sq ft/hr	15.60 sq m/hr
Y-Axis Accuracy	± 0.0015"	0.0381mm
Z-Axis Print Height	4"	10cm
Maximum Printable Area	60" x 39"	152.4cm x 99cm
Maximum Substrate Size	60" x 39"	152.4cm x 99cm
Media[3]	Prints to a variety of substrates.[4]
Windows Operating System	Windows 10 computer and monitor included
RIP Software	*New* Color Byte 11 with Compass Feature
Power Source	2 x 220V 30A 50/60Hz + 1 x 110V 10A 50Hz or 220V 5A 60Hz for computer & monitor
Operating Environment Temperature	68°F – 86°F	20°C – 30°C
Operating Environment Humidity	Non-condensing 40% -70%
Weight	1235lbs	560kg
Dimensions	126" W x 67" L x 51" H	3.2m W x 1.7 L x 1.29m H
Warranty	1 Year Limited Warranty

Compliant with patents: directcolorsystems.com/patents

 1 Substrate dependent. 2 Bidirectional; Print times may vary dependent on print mode configuration. 3 All substrates and textiles/fabrics should be tested for image receptivity, adhesion, and durability, with final acceptance and suitability determined by the customer. 4 Some materials may require the use of an adhesion promoter or a chemical wipe prior to printing to promote adhesion.

This data sheet is for informational purposes only. Direct Color Systems makes no warranties, expressed, or implied in this summary. Specifications are subject to change without notice. This is not an offer for sale.

DCS UV-53DTS SITE SURVEY

To Be Completed and Returned to DCS Prior to Scheduling the Printer Installation

Thank you for your interest in Direct Color Systems UV-53 DTS printer. Before you consider purchasing one for your facility, it is important to know the space, power, and other site related requirements.

1.0 – Logistics

It is the customer's responsibility to receive, uncrate and move the printer to its permanent location. If you are not familiar with moving machinery of this size and/or you do not have the required list equipment, Direct Color Systems recommends hiring a subcontractor in your area with rigging and machinery capable of moving the printer to the designated area within your facility. Included below is the DCS UV-84 DTS Pre-Installation Checklist. The Pre-Installation Checklist must be completed, signed, and returned to Direct Color Systems in order to ensure that you and the installing technician are fully prepared for the printer installation.

2.0 – Printer & Skid Specifications

The printer should be installed in a location that meets the following requirements. It is the customer's responsibility to complete the necessary requirements outlined in this site survey prior to the printer installation.

Printer Dimensions (W x L x H)	10.5' x 5.6' x 4.3' / 3.2m x 1.4m x 1.3m **Weight**: 1235 lbs. / 560kg
Skid Dimensions (W x L x H)	10.75' x 6.3' x 5.3' / 3.3m x 1.92m x 5.9m
Rigging	Pallet Jack or Forklift with fork extensions is recommended for unloading.

3.0 – Temperature & Humidity Requirements

The temperature and humidity found in the production area and also the ink and media storage areas can have a significant impact on print quality. It is strongly advised to follow the recommended specifications.

|	
Operating & Standby Temp	68° - 86°F / 20°C – 30°C
Conditions for Optimal Print Quality	68° - 78°F / 20°C – 25.5°C
Non-Operating Temperature	40° - 95°F / 4.4°C – 35°C
Operating Humidity	40% - 70% Relative Humidity
Conditions for Optimal Print Quality	40% - 60% Relative Humidity
Non-Operating Humidity	15% - 70% Relative Humidity

4.0 – Facility Requirements

The route from the loading dock to the installation area must meet all specifications including height, width, and clearance of ceilings, doorways, and corridors and be located on the ground floor without steps.

• Install the printer on a level floor that is capable of sustaining its weight.

• Locate the printer in an environment with minimal dust.

• Ensure the printer has adequate ventilation.

• Position the printer away from direct airflow from the ventilation system.

• Keep the printer away from mechanical vibrations.

• Provide access to connect the printer to the local area network.

• Store the media and ink in an area with similar temperature and humidity conditions as the printer.

• DO NOT allow the printer to be in the path of direct sunlight.

• DO NOT position the printer near open doors or windows or any area where the temperature
  and humidity can change abruptly.

• DO NOT install the printer near humidifiers, refrigerators, fans, water faucets, heaters, or similar equipment.

5.0 – Recommended Space Requirements

When considering the workspace layout of the production area, please refer to the following space and power requirements. There must be sufficient space to install, operate, and load/unload materials. These requirements ensure a safe and suitable production environment that promotes an efficient and productive workflow. Please note that this is the minimum space required. More space may be desired for operating or servicing the machine.

For Flatbed printers, it is recommended to have AT MINIMUM two feet of clearance around the printer.

CUSTOMER TO INSTALL HERE:
1 x 220-230V 30 AMP RECEPTACLE
1x 220-230V 20 AMP RECEPTACLE

UV CHILLER

15.5" x 21.5" / .393m x .546m

2ft / .6m

2ft / .6m

2ft / .6m

9.5ft / 2.92m

Printer Power Cable
16ft / 4.5m

2ft / .6m

INCLUDED WITH PRINTER:
COMPUTER, MONITOR
AND ASSOCIATED CABLES.

14.5ft / 4.41m
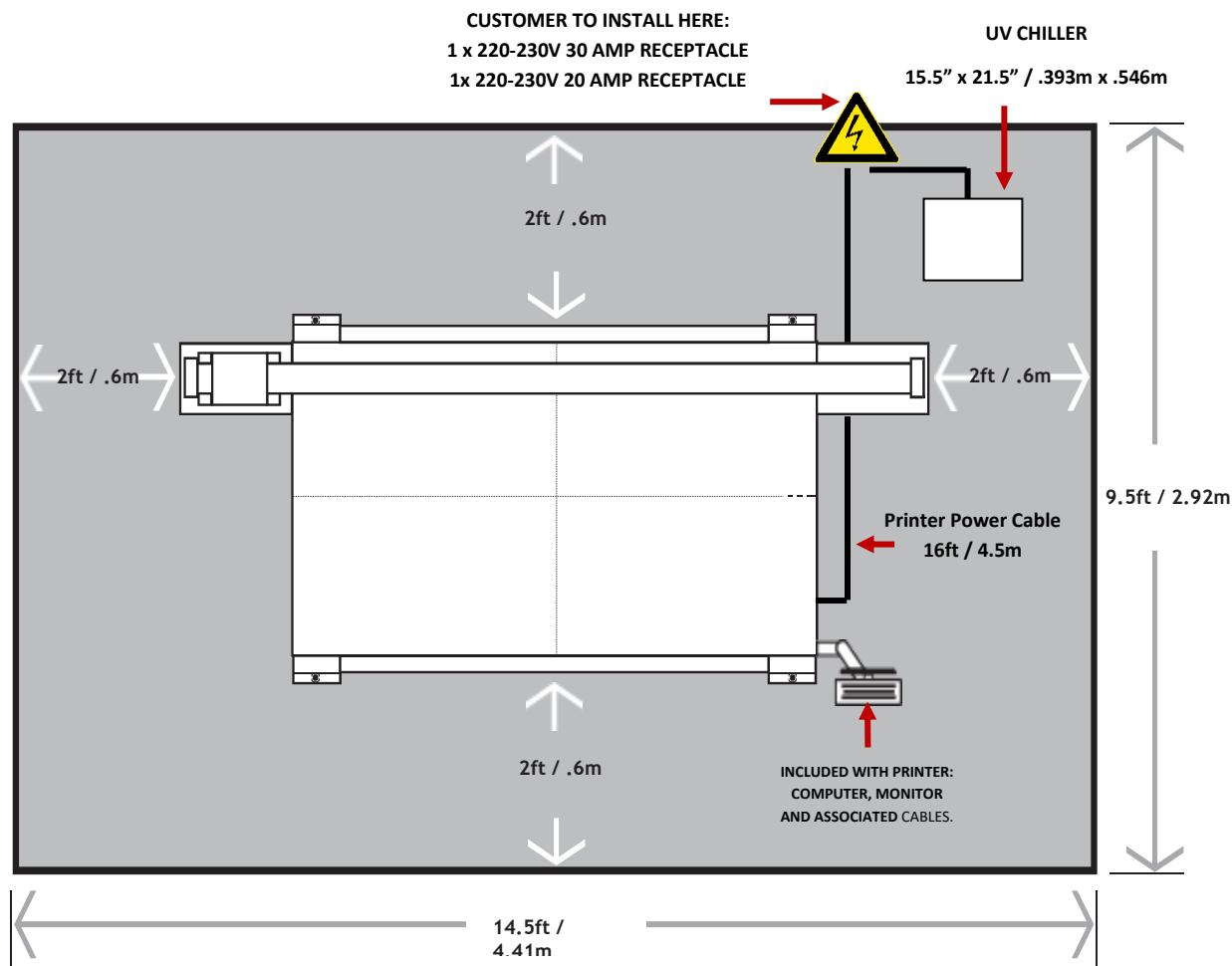
6.0 – Electrical Requirements

To avoid delays in the installation of the printer, please have a qualified electrician review the electrical specifications, evaluate your facility's electrical system, and install any needed electrical components.

The power location for the printer is located on the bottom, left rear.

- Dedicated breakers are required on every line.
- A voltage of between 220v and 230v must be maintained.
- Make sure each circuit meets the voltage requirements by confirming the value with a voltage tester.
- The voltage/circuits must be free of spikes, surges, and sags.
- Use the power cable supplied with the printer and plug it directly into the grounded electrical connector.
- Do not lengthen the power cable with an extension cord, which could result in a drop in voltage and
- may damage the printer.

6.1 – Electrical Specifications for Printer

<u>International Customers:</u>

Provide these electrical specifications to a qualified electrician in order to ensure that the appropriate style plugs are installed based upon the local electrical requirements for your specific geographic location.

Printer Power Requirements	**Electrical Circuit** – One (1), Single-phase 220 volt AC circuit rated at 30 amps direct from the electrical panel to the printer.
	Electrical Connector – One (1), 30 amp, NEMA L6-30R, 2P, 3W, locking connector with grounding
Chiller Power Requirements	**Electrical Circuit** – One (1), Single-phase 220 volt AC circuit rated at 20 amps direct from the electrical panel to the printer.
	Electrical Connector – One (1), 20 amp, NEMA L6-20R, 2P, 3W, locking connector with grounding

6.2 – NEMA Electrical Connectors
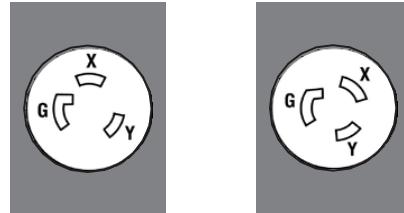
NEMA L6-30R Outlet

NEMA L6-20R Outlet

7.0 – Network Requirements

The printer uses a computer with print controller software DCSLink that must be connected to the local area network.

- The installation of all network hardware, including a switch and network cables are the responsibility of the customer. All work must be completed before beginning the installation of the printer. A 1GB or faster network switch is recommended.

8.0 – Safety

8.1 - General Safety Information

The operator must be adequately trained by a certified technician/trainer and should operate the printer using the guidelines set forth during training. Failure to do so may result in damage to the printer or personal injury.

- Push the Emergency Stop button to stop the printer immediately.
- Release the Emergency Stop button before Powering On the printer.
- Avoid staring directly into the UV light; this is harmful to your eyes.
- Immediately rinse any ink that comes in contact with skin.
- Avoid standing near the printhead carriage while it is moving.

8.2 – Electr

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  fron

8.3 – Ventilation

- DO NOT operate the printer in a non-ventilated workspace.
- Special ventilation is not required and is solely at the discretion of the customer. Customers should consult state and local requirements and regulations.

8.4 – Mechanical Hazards / Awareness

- Always remember to push Emergency Stop in case of an emergency. The printer should not be Powered On until the emergency is resolved.
- Before printing, verify that there are no individuals or items in the printing area.
- Keep fingers away from the Printhead Carriage, media path, and all moving parts.
- DO NOT vigorously shake, drop, or impact the printer while moving, installing, or operating, which may cause damage.
- DO NOT stand or place heavy items on the printer, which may result in damage.
- DO NOT disassemble or replace any of the parts or cables on the printer without first activating the Emergency Stop.

- DO NOT allow bodily contact with the moving parts of the printer, which may result in personal injury or cause damage to the printer.
- DO NOT spill any liquids on the electronic parts of the printer.

8.5 – UV Light

- The LED Lamps emit high power UV Light when printing. The printer should be operated with all safety shielding installed to protect the operator from eye and skin damage.
- DO NOT stare directly into the UV light and avoid continuous eye contact, as this is harmful to your eyes.

8.6 – UV-curable Ink

- Read and practice safety guidelines as outlined in the DCS Ink Series Data Sheet and Safety Data Sheets.
- Contact Direct Color Systems at info@directcolorsystems.com for Ink Series and SDS.
- Use gloves and eye protection when handling the ink or maintenance fluids.
- If the ink does come in contact with skin, wipe off with a clean, dry cloth (do not use solvent or flush solution) and wash the affected area with soap and water.
- Avoid breathing ink vapors.
- Dispose of ink according to SDS and local regulations.

8.7 – Danger of Fire and Explosion

- DO NOT smoke, use open flames, pilot lights, stoves, heaters, or cause sparks around the printer,
  which could trigger a fire or explosion.

8.8 – Modifications

- Any unauthorized alterations, changes, or modifications to the printer and its components are strictly
  prohibited. Failure to comply may result in a loss of warranty.

9.0 – Signature

Please complete this fillable PDF form digitally and email OR print, complete, scan and email to Direct Color Systems at orders@directcolorsystems.com to begin the process of scheduling the delivery and installation of your printer.

DCS Corporate Contact Information

99 Hammer Mill Road Rocky Hill, CT

06067 USA Phone: +1 860-829-2244

By signing below, the Company Representative acknowledges that site requirements have been communicated. Failure to complete these items may result in delayed installation and increased costs.

Company Information	
Company Name:	
Street Address:	
City:	
State:	
ZIP:	
Email:	
Phone:	
Fax:	
Name:	

Signature: _____

RETURN ALL PAGES OF THIS DOCUMENT TO

DIRECT COLOR SYSTEMS

US and Canada:

Email to orders@directcolorsystems.com or FAX to 860-829-2255

International Customers:

Email to orders@directcolorsystems.com or FAX to your local distributor or sales representative

DCS UV-53DTS PRE-INSTALLATION CHECKLIST

To Be Completed and Returned to DCS Prior to Scheduling the Printer Installation

CONGRATULATIONS!

Your new DCS UV-53 DTS printer will soon be shipping to your location! We are very excited for you to receive your new printer. This document will ensure that you are fully prepared for the arrival of your printer as well as the technician who will be visiting your location to install the machine and provide new operator training. Please be sure to complete this document and then return it to Direct Color Systems in order to schedule your printer installation and training.

1.0 - Accessing Important Documentation

For your convenience, the most up-to-date documents pertaining to your printer(s) reside on the Direct Color Systems Knowledge Base, which is accessible through your DCS Zendesk Customer Account. In addition to accessing important documentation, your DCS Zendesk Customer Account is also your direct line to the DCS Technical Support Team.

Please follow the steps below, which will guide you through the DCS Zendesk Customer Account registration process. When creating your DCS Zendesk Customer Account, please take into consideration that this account should be accessible by the primary operator(s) of the printer(s).

2.0 – DCS Zendesk Customer Account Registration Process

A. Visit https://directcolorsystems.zendesk.com/ and select the option **Sign Up**, which is located under the "Sign in" button.

B. Complete the Form and then click Sign Up at the bottom of the screen.

C. The email address used to register will receive an email within a few moments. Select the unique URL in the email to verify your email address and complete the registration process. If you do not receive a verification email, please contact Customer Service at 860-829-2244 for assistance or +351 223 274 639 for international customers.

D. At this point, you will have general access to the site allowing you to view your My Activities and Profile. In addition, you will also have access to the Direct Color Systems Knowledge Base.

2.1 – Review Important Documents

Once you have access to the Direct Color Systems Knowledge Base, please review the following important documents:

2.1.1   DCS UV-53DTS Warranty Agreement
2.1.2   DCS UV-53DTS Printer Specification Sheet
2.1.3   DCS UV-53DTS Printer Operation Manual
2.1.4   Adhesion Promoters Document

3.0 – Installation and Training Expectations

Operator Training will take place following the installation and calibration of the printer. Once the on-site training begins, the undivided attention of the primary operator is required. In addition to the primary printer operator, DCS highly recommends that a backup operator and the primary artwork designer complete this training program as well.

For the safety of your staff and to avoid damage to the printer, only personnel who complete this training program and sign the installation agreement confirming completion should be authorized to operate this printer. In the event that all personnel trained to operate this printer are no longer with the company, it is the customers responsibility to contact the Direct Color Systems Technical Support Team in order to coordinate new operator training.

3.1 – Training Overview

The On-Site Training Program will consist of the following hands-on instruction:

- Introduction to the DCS UV – 53 DTS printer and a demonstration of the printer in operation.

- Walkthrough of the DCS ZenDesk Customer Account and DCS Knowledge Base.

- Using the DCS UV-53 DTS User Guide, review the primary printer components/controls, safety precautions,environmental/operating requirements, and the theory of operation of the DCS UV –53 DTS.

- The printer control software and how this software is used to drive the printer operations.

- Daily, periodic, and preventative maintenance procedures.

- General and preventative maintenance procedures.

- Substrate selection, how to position the substrate on the media table, and how to effectively operate the vacuum table.

- Setting the print head height to the substrate, setting a specific print location, and sending a print file through the Print Control software.

- The workflow for importing artwork into the Color Byte, Rip and Print Control software in order to print a job effectively and efficiently.

- The print options available in the Print Control software and how to select the appropriate settings for various print applications.

- Printing flat images, Texture3D and ADA/Braille.

- Overview of the consumable items/parts, how to source those items/parts, and where to locate the training materials to perform those item/part replacements.

- Overview and hands-on training for troubleshooting the most commonly encountered printer and software errors and the appropriate path to request printer and/or software support if needed.