



USER MANUAL





Foreword

This user manual is briefly describing the operational aspects of the **Metro (Kyocera Head)** machine. In this document, the step-wise instructions for handling various aspects of the machine with visual screens are provided for easy and better understanding. It also describes the error messages encountered while working with the machine with appropriate remedial actions required to be taken by the user.

This manual serves as the reference tool which guides their customers how to use or operate the **Metro (Kyocera Head)** machine without anyone else assistance. The information provided in this document ensures its uniqueness and language quality. For safe and proper use of the product, please read this manual carefully and follow all the instructions.

Disclaimer

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Doc Type	Doc Code	Version	Machine Name	Date of Issue
User Manual		1	Metro (Kyocera	
			Head)	

The reference table is shown in the below table:



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1. About Document

Purpose

The purpose of this document is to guide and educate the targeted audience about the Printer and its Printer Manager software so that they can easily and effectively handle as well as use it as per their requirements. Additionally, this document also provides step-wise instructions for handling various aspects of the printer and its related software with the help of graphical screens for easy and better understanding. Moreover, the document also describes commonly encountered problems while working with the printer and Printer Manager software with appropriate remedial actions.

Intended Audience

This document is meant for all the users who want to use the Printer for their printing business. Sometimes, the targeted audience has little knowledge about the printer but in most of the cases, targeted audience is much familiar with the terminologies of printer and printing business. Thus, this document is designed to facilitate both types of users.

2. Machine Specification

Machine specifications are shown as below:

METRO MT 8166				
Printing Technology		Drop-on-demand, Piezo Electric Inkjet		
Print Heads		Industrial Grade Jetting Assemblies		
Print Head Type		Industrial Grade Jetting Assemblies		
	Resolution	Upto 2400 DPI		
	Height Adjustment	upto 30mm		
	Cleaning Method	Pressure Purge and Wiping		
	Wetting Control	Piezoelectric Actuations		
Ink Type		Reactive/Disperse/Pigment/Acid		
	Colors	8 Colors		
	Supply	10 Ltr, Bulk ink Supply System with inline degassing		
Fabric	Types	Cotton, Viscose, Polyester, Polyamide, Silk, Wool		
	Thickness	Upto 10mm		
	Max. Width	1800 MM		
	Roll Width	400 MM		
Fabric Drying System		Infrared Heaters		
Operating Interface		Touch screen		
Printing Interface		USB 3.1		
RIP Software Supported		ErgoSoft / NeoStampa (Colorjet Editions)		
File Format		JPEG, TIFF, BMP/PDF (RGB, CMYK)		
Power Supply		220 V, 80 A Single/Three phase load distribution, 50Hz,		
Operating Conditions		Temperature 18 to 28 C, Humidity: 35-80% RH (Non-		
		Condensing)		



3. Machine Overview

Front View

The **<u>Front View</u>** of the machine is shown in the image below:

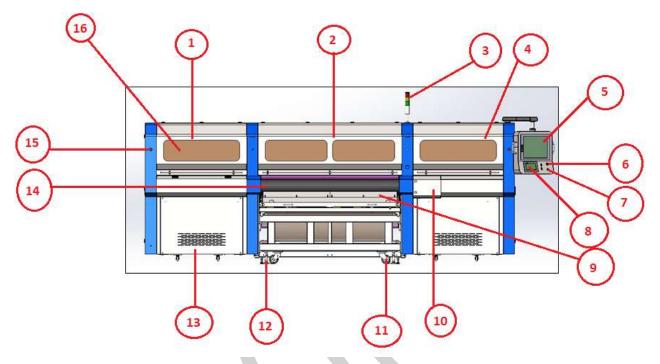


Fig 1: Displaying the Front View of the Machine

Table	1:	Different	Part	of the	Printer

1. Left Cover	2. Front Cover
3. Signal Lamp	4. Right Cover
5. Touch Screen	6. Emergency Button
7. Power Button	8. HMI
9. Washing System	10. Conveyor Motor
11. Wheels	12. Levelers
13. Negative Pressure Control System	14. Conveyor Belt
15. Emergency Button	16. Carriage Origin



Back View

The **<u>Back View</u>** of the machine is shown in the image below:

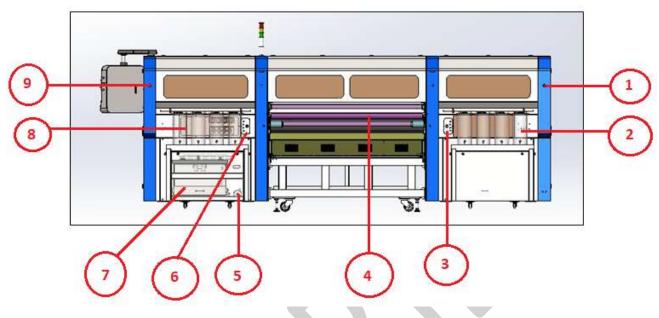


Fig 2: Displaying the Back View of the Machine

Table 2: Different Part of the Printer

1. Emergency Button	2. Ink Tanks
3. Ink Inlet	4. Pressure Roller
5. Jetting Pump	6. Ink Inlet
7. Water Tank	8. Ink Tanks
9. Emergency Button	



Front and Back Views of Feeder The <u>Front Side</u> of the <u>Feeder</u> is shown in the image below:

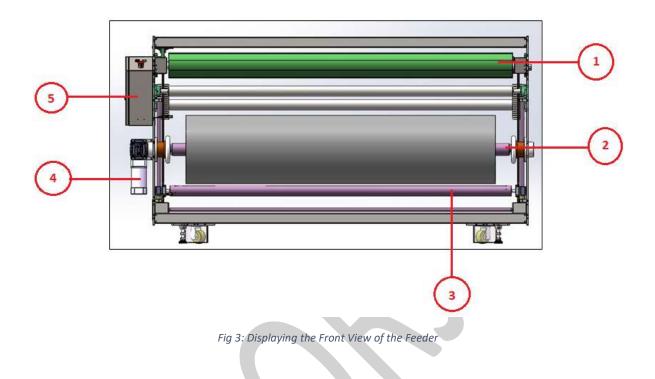


Table 3: Different Part of the Printer

1. Fabric Spreading Roller	2. Supply Air Shaft
3. Dancing Bar	4. Supply Motor
5. Power Control Unit	



The **<u>Back Side</u>** of the <u>Feeder</u> is shown in the image below:

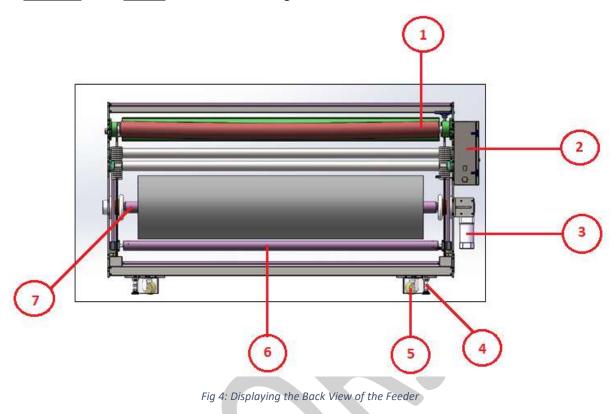


Table 4: Different Part of the Printer

1. Fabric Spreading Rolle	er 2. Power Control Unit
3. Supply Motor	4. Leveler
5. Wheel	6. Dancing Bar
7. Supply Air Shaft	



Front and Back Views of Dryer

The **<u>Front Side</u>** of the **<u>Dryer</u>** is shown in the image below:

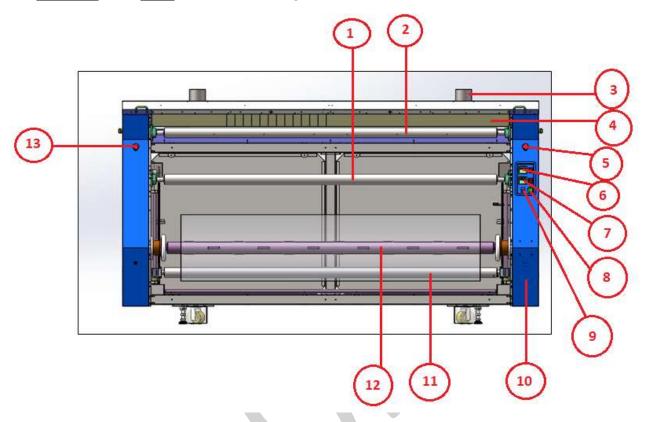


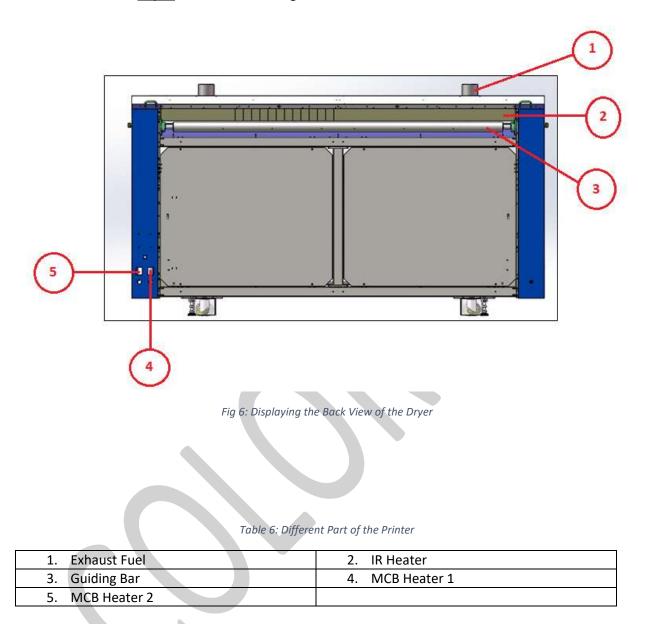
Fig 5: Displaying the Front View of the Dryer

Table 5: Different Part of the Printer

1. Guiding Bar	2. Guiding Bar
3. Exhaust Fuel	4. IR Heater
5. Emergency Button	6. PID Controller
7. PID Controller	8. Heater Switch
9. Panel Switch	10. Takeup Motor
11. Takeup Air Shaft	12. Dancing Bar
13. Emergency Button	



The back side of the **Dryer** is shown in the image below:





4. Getting Ready for Printing

Switch ON Procedure

Follow these steps to switch ON the printer:

Step 1: Switch ON the MCB from back side of the machine.

Step 2: Check whether an **Emergency** button is pressed or not. If the **Emergency** button is pressed, then immediately release it.

Step 3: Switch ON the **Power** button of the machine. Automatic initialization of machine gets started, as shown below:



Fig 7: Switch ON the Power Button

Step 4: Firstly, Z axis gets initialized and capping goes down.

Step 5: After the initialization of capping, X axis gets initialized.

Step 6: Capping start verifying the maximum up limit and stay on defined position.

Step 7: Wiper unit gets activated and starts the initialization process.

Step 8: Refill water tank with the clean water.

Step 9: Check the ink level in the Main tanks.

Step 10: Check the Waste Ink Bottle and empty it, if full.

Step 11: Load the fabric and engage the Press Roller (Refer to the Loading Fabric section).

Step 12: Take care about fabric handling from supply and take up sides.

Step 13: Switch ON the Feeder and Dryer units.

Step 14: Check Print Head Nozzles status by issuing the Nozzle Test command. If nozzle test result is not OK or nozzles are blocked, clean the Print Head by performing the steps given in the Head Cleaning section.



Step 15: Check whether Jetting and Brush Roller working properly or not.

Step 16: Rip the image file using the Ripping software provided with the machine.

Step 17: Set the print origin to specify the printing starting position.

Now, the printer is ready for printing.

Signal Lamp Description

Signal Lamp description is given as below:

Color	Light of Steadily	Flashing Light	Remarks
Red	Emergency	System Error	Need to Restart
Orange	Printer is Working	Printer in working mode	
Green	Printer is ON		
Blue	Printer is ON		

The **<u>Signal Lamp</u>** is shown in the image below:

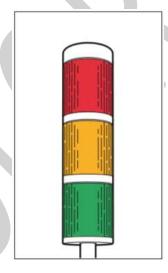


Fig 8: Displaying the Signal Lamp



Loading the Fabric

Follow these steps to load the fabric:

Step 1: Run the Supply Motor in the manual.

Step 2: Stop the Supply Motor when the unlock position of Safety Chuk and Shaft get matched, as shown below:



-Unlock Position

Fig 9: Displaying the Unlock Position

Unlock Position Step 3: Push the Safety Chuk to remove the shaft.

Step 4: Insert the shaft into the fabric roll.

Step 5: After inserting the fabric roll, fill air into the shaft to fix the roll with shaft, as shown below:



Fig 10: Filling Air



Step 6: Load the media as per the path given below:

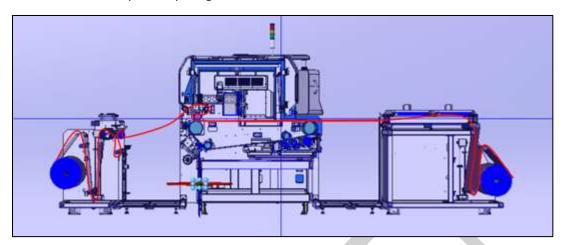


Fig 11: Displaying the Fabric Path

Now, the fabric gets loaded.



Filling Ink

To refill ink, remove the Main Ink Tank cap and refill ink as per the color sticker. The Main Ink Tank is shown in the image below:

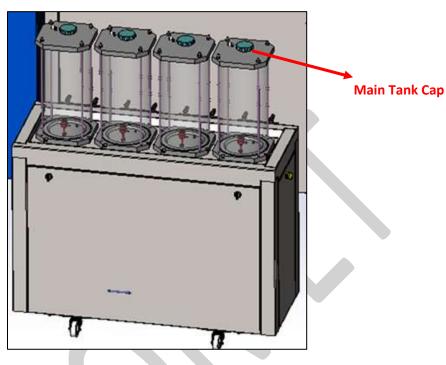


Fig 12: Displaying the Main Ink Tank

Points need to remember:

- The Main Ink Tanks are located at the back of the printer
- The capacity of ink main tank is 10Litre
- Ink in the Main tanks is pumped to the Sub Ink Tanks located at the Carriage Assembly.

The Ink Sub Tank is shown in the image below:

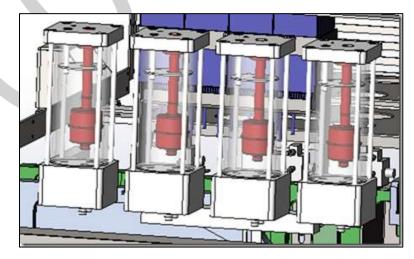


Fig 13: Displaying the Ink Sub Tank



5. Glue Coating

Glue Implementation

Glue is composed of three different chemicals and two solvents.

Chemicals:

- **Prima**: It is used as a primitive coat, for smoothening the belt surface. This is to be done only when the previous glue layers have been washed completely.
- **Therma**: It is used for an intermediate coat, for activating and deactivating the glue according to the temperature variation.
- **Perma**: It is the final glue coat, to make the belt sticky for the fabric.

Solvent:

- **Cleantek**: This liquid solution is used for the renewing/refreshing the tackiness of the Perma adhesive. In digital printing, the adhesive film must be even, thin and hard (to maintain accurate distance in between print head and fabric). The Cleantek removes foreign elements, like dust and micro fibers, from the top layer, hence enhancing the adhesion property of the Perma. If there is no improvement using the Cleantek, it means it's time for a coat of the Perma.
- **Solvtek**: This is used either to dilute the adhesives, or to complete removal of the all adhesive layers. The following are the two main reasons for removing all the glue layers:-
 - When the thickness of the adhesive layer goes on increasing due to multiple coat of the Perma.
 - When the glue layer feels smudgy or groovy (in terms of evenness).

Stages of Glue (Adhesive) Process Stage 1: Prima coat

Stage 2: Therma coat

Stage 3: Perma coat

An interval of 4hrs is required for the glue to set and dry. After each glue coat, run the glue cycle for 50 minutes with glue heater ON. After final coat of Perma, printing can be started. The third stage is generally a repetitive process, repetition depending on the frequency of printing hours. And when the glue coats get uneven or once in 2-3 months, whole process has to be repeated after removing existing Glue layers.

Note: Average consumption for the Cleantek solvent is 500ml for one time.

Approximate consumption of chemicals for a year:

- Prima: Approx. 2 Ltrs
- Therma: Approx. 2 Ltrs
- Perma: Approx. 5 Ltrs
- Cleantek: Approx. 4 Ltrs
- Solvtek : Approx. 10 Ltrs



Note: Actual consumption depends on the work load, fabric type, and the maintenance. Generally, shelf life for these chemicals is approx. 4 years.

Shelf life for this chemical are approx. 4 years. Some of the Glue are having these chemicals as base and it harms the belt or adversely affects the life of the Printing Blanket (Conveyor Belt):

RECOMMENDED

- Alcohol
- Methyl alcohol
- Ethyl alcohol
- Isopropyl alcohol
- Ester
- Butyl acetate
- Ethyl acetate

NOT RECOMMENDED

- Aromatic
- Benzene
- Toluene
- Xylene
- Aliphatic
- Hexane
- Cyclohexane
- Ketone
- Acetone
- Methyl ethyl ketone (MEK)
- Chlorinated hydrocarbon
- Methyl chloride
- (Mono) chlorbenzene
- Chloroform
- Trichloroethane
- Trichloroethylene
- Ether
- Ethyl ether
- Tetrahydrofurane (THF)



Glue Process Preparation

Follow these steps for glue process preparation:

Step 1: Keep the ventilators and exhaust fans ready.

Step 2: Lift up the Press Roller and remove the fabric, if any.

Step 3: Run the Wash Cycle from HMI, simultaneously belt can be cleaned by wiping with cloth.

WASHING	SYSTEM
BRUSH OFF	BELT DRYER OFF
TAB DOWN	JETTING PUMP OFF
PRINT DRYER OFF	
	\bigcirc

Fig 14: Running the Wash Cycle

Step 4: Put masking PVC tape on both edges of the Conveyor Belt, by simultaneously moving the belt through HMI in slow speed.

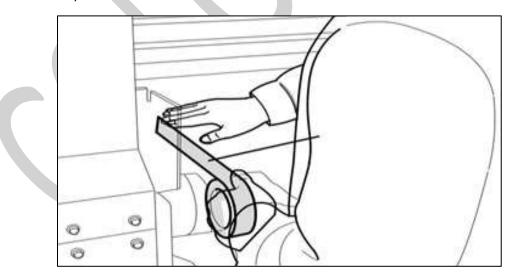


Fig 15: Using Masking Tape



Step 5: Put on gloves, goggles, and face mask for safety



Fig 16: Using Safety Precautions

Step 6: Keep ready the following items:

- Glue container(500-600ml), whichever required
- Home cleaner liquid spray
- Pouring container
- Waste bin
- Woven cotton bud sticks (for spreading the glue)

Glue Coating Procedure

Note: Extreme care to be taken during the glue process, any negligence may render the coat unsuitable for use, and complete process may be required to be repeated. 3 persons will be required for this process.

Follow these steps to start the glue coating process:

Step 1: Put the Press Roller down.

Step 2: Set the Belt Movement (Refer to the "BELT MOVEMENT" section) and switch ON the dryer.

Note: Belt speed should be slow.

Step 3: Go to the back of the machine. Pour the 70% glue equally throughout the belt, near the Press Roller, leaving the 10cm from both the edges.

Step 4: Let the two persons hold the Press Roller firmly, so that it doesn't move.

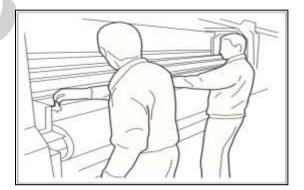


Fig 17: Closing the Press Roller



Step 5: Once the glue has crossed the press roller, speed can be increased to 20. Using the cotton bud stick, keep spreading the glue from the area where glue is in excess, to the area wherever the glue is less in quantity.

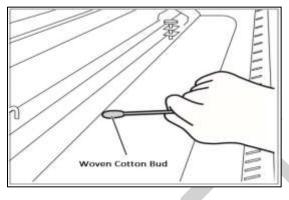


Fig 18: Spreading the Glue

Step 6: Wherever the glue under the press roller is diminishing, pour the remaining glue over such areas.

Step 7: When glue below the Press Roller seems to be diminishing at some areas, and becoming of higher viscosity and uneven, person standing in front, should start spraying the cleaner liquid continuously till the end.

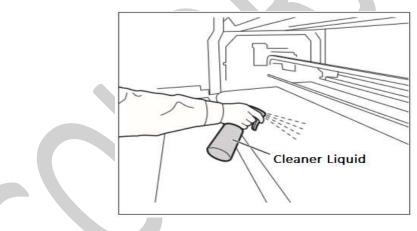


Fig 19: Spraying the Cleaner Liquid

Step 8: Later the cleaner liquid spraying should be done throughout the belt, until the remaining glue appears to be deactivated, due to mixing of cleaner liquid.

Step 9: Once the glue seems to be deactivated, stop spraying liquid, and do simultaneously and quickly below steps:-

- Slightly rotate the Press Roller in opposite direction, to move the sticky portion upwards away from the belt.
- Lift the Press Roller from the both sides at a time and stop the glue cycle immediately.

Step 10: Remove the excess deactivated glue and throw in the waste bin. Wipe up only the area where liquid is present, touching dry belt will damage the coating.



Step 11: Once excess glue is removed, run glue cycle for 30-50 min with glue dryer on.

Step 12: Wipe off the glue from the Press Roller, with the help of cleaner damp towel.

While cleaning the Press Roller, cover the belt surface with poly sheet to avoid the glue remains falling on the belt surface.

Step 13: Leave machine idle for 4 hours to let glue dry and set. (Next glue coat has to be done only after resting period of 4 hours) Above process has to be repeated for every glue coat process.

Glue Removing Preparation

Prepare and ready the following below mention things before removing glue:

- Prepare proper ventilators.
- Wear proper safety armament to prevent from touching glue and cleaner.
- Put cover sheets on under belt, printer front and rear to protect them from dropped glue and cleaner.

Note: Do not use the Belt Washing Unit during the glue coating or glue removing process. Additionally, glue or the cleaner may damage the brush-roller or sponge roller, thus put a cover on the washing unit.

Glue Removing Procedure

Glue coat gets damaged due to several reasons like during unpacking or unloading. Thus, service engineer needs to remove the damaged glue coating and recoat the glue on the belt.

Follow these steps to remove glue:

Step 1: Prepare cleaner which is dedicated to using glue.

Step 2: Wipe cloth or paper towel with purified water. Place wipe clothes on belt to cover belt.



Fig 20: Wiping the Belt



Step 3: Pour cleaner liquid (Solvtek) onto wipe clothes.

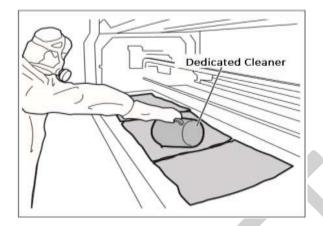


Fig 21: Pouring Cleaner Liquid

Step 4: Wait 5 minutes to dissolve glue.

Step 5: Wipe dissolved glue and cleaner by wipe clothes.

Step 6: After wiping out the part, turn the belt and repeat wiping until wipe out over all.



Fig 22: Wiping the Glue

Step 7: Spray or pour purified water onto the belt.

Step 8: Wipe out cleaner on the belt by paper towel.

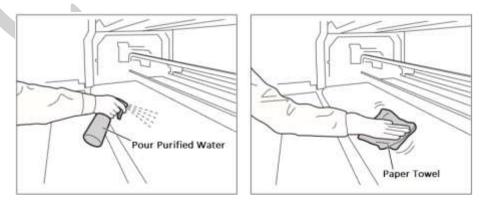


Fig 23: Wiping Out Cleaner from the Belt



Step 9: After clean up the part, turn belt and repeat cleaning until clean up over all. Remove cover sheet which covers washing unit.

Step 10: Finally, remove remained cover sheets, and keep the belt dry.

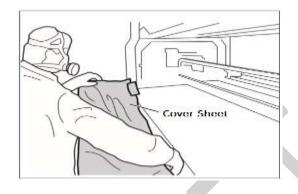


Fig 24: Removing the Cover Sheet



6. Control Panel Operations (HMI)

Main Menu

After the Start Up screen, the **MAIN MENU** screen appears with a list of options, as shown below:

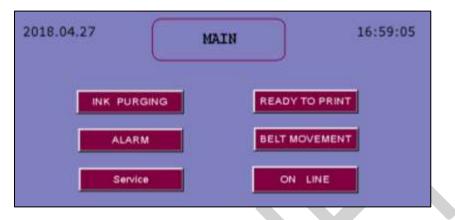


Fig 25: Displaying the Main Menu Screen

The description of different options in the **MAIN MENU** screen is given as follow:

- **INK PURGING:** Using this option, user can purge.
- **READY TO PRINT:** Move Spreader Roller in reverse and forward direction, enable the Washing Unit, Switch ON or OFF the Feeder Unit and Take Up, etc.
- ALARM: Switch ON or OFF the alarm unit.
- **BELT MOVEMENT:** Move the belt in reverse and forward direction with different modes viz. Auto and Manual.
- Service: Switch ON or OFF the print engine, negative control, and ink valve.
- **ON LINE:** Enable the ON-LINE mode.

Purging Ink

Purging of each color is performed by touching the **INK PURGING** button on the **MAIN MENU** (Refer to Fig 25). The INK PURGING screen is shown in the image below:

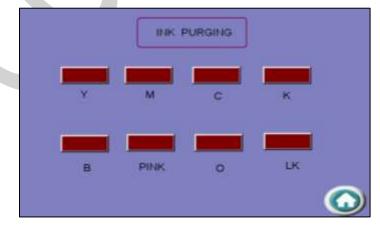


Fig 26: Displaying the INK PURGING Screen



For purging, touch each color button for few seconds and then, wipe extra ink using the cloth issue.

Enabling or Disabling Services

User can enable or disable Print Engine, Negative Control, and Ink Valve by touching the **Service** button on the **MAIN MENU** (Refer to Fig 25). The **SERVICE** screen is shown in the image below:



Fig 27: Displaying the SERVICE Screen

Touch on the service which you want to disable (Refer to Fig 27).

Controlling Belt Movement

To control the belt motion, select the **BELT MOVEMENT** icon from the **MAIN MENU** screen (Refer to Fig 25). The **BELT MOVEMENT** screen appears as shown below:

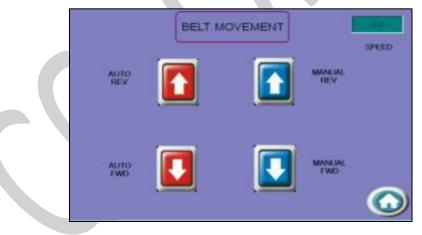


Fig 28: Displaying the BELT MOTION Screen

Using the **BELT MOTION** screen, you can perform the following actions:

- **SPEED**: Set the speed of the Conveyor Belt.
- AUTO REV: Auto move the belt in the reverse direction.
- **AUTO FWD**: Auto move the belt in the forward direction.
- **MANUAL REV**: Manually move the belt in the reverse direction.
- **MANUAL FWD**: Manually move the belt in the forward direction.



Setting Belt Speed

To set the belt speed, select the **SPEED** icon from the **BELT MOOVEMENT** screen. The **Numeric Keypad** appears on the **BELT MOVEMENT** screen, as shown below:

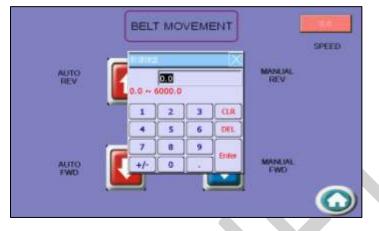


Fig 29: Setting the Belt Speed

Now, enter the belt speed in the Numeric Keypad and select the Enter button to set the belt speed.

Setting Washing Unit

To set the position of washing tub, select the **TUB DOWN** icon from the **WASHING SYSTEM** screen. The **WASHING SYSTEM** screen appears, as shown below:



Fig 30: Displaying the WASHING UNIT Screen

After setting the tub position, switch ON the brush, belt dryer, jetting pump, print dryer.

Using the **WASHING TUB** screen, you can perform the following actions:

- BRUSH OFF: Switch ON or OFF the brush unit.
- **BELT DRYER**: Switch ON or OFF the belt dryer.
- **TAB DOWN**: Move the washing tub in upward direction.
- **JETTING PUMP**: Switch ON or OFF the jetting pump of the machine.
- **PRINT DRYER**: Switch ON or OFF the print dryer.



Controlling Dryers Settings

To change or update the dryer settings, select the **READY TO PRINT** button from the **MAIN MENU** screen (Refer to Fig 25). The **READY TO PRINT** screen appears as shown below:

	READY TO PR	INT
P-DRYER 2 C-TEMP	0.0 °C	
P-DRYER 2 S-TEMP		
P-DRYER 1 C-TEMP	0.0 °C	WASHING SYSTEM
P-DRYER 1 S-TEMP	0.0 °C	
B-DRYER C-TEMP	0.0 °C	
B-DRYER S-TEMP	0.0 °C	

Fig 31: Displaying the HEATERS SETTINGS Screen

Using the above screen, change the washing system, switch ON or OFF FEEDER and SPREADER ROLLER, and print dryer settings.

READY TO PRINT Option

The <u>**READY TO PRINT**</u> enables to make the machine in the ready to print state. Using the **READY TO PRINT** screen, you can ON or OFF Brushing, Jetting, and Washing, take up, print dryer, and belt dryer. The **READY TO PRINT** screen appears when you select the **READY TO PRINT** option from the **MAIN MENU** screen, as shown below:

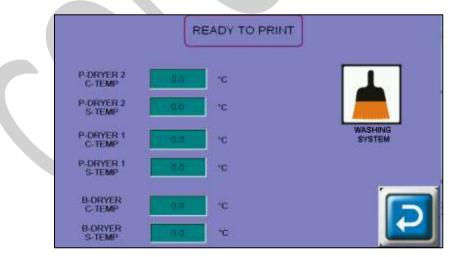


Fig 32: Displaying the READY TO PRINT Screen



ONLINE Mode

Using the ONLINE mode, user can directly issue the print command, stop the print, resume the print, and start the print from beginning. On touching the ONLINE icon, the following screen appears:

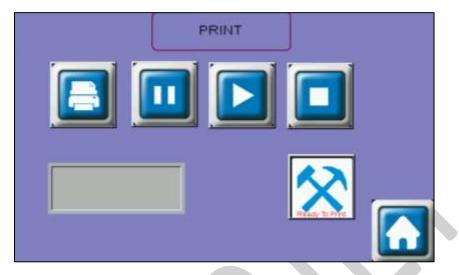


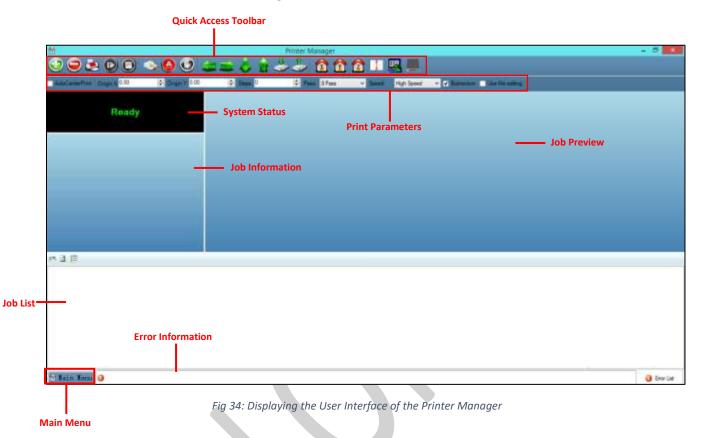
Fig 33: Displaying the ONLINE Mode Screen

To go directly to the READY TO PRINT screen, touch on the Ready To Print icon.



7. Getting Familiar with Printer Manager Interface

The User Interface of the Printer Manager software is shown as below:



The description of the Printer Manager window is given as below:

- Window Control: Use to minimize, resize or close the Printer Manager window.
- **Main Menu**: Consist of several sub menu options viz. Settings, Tools, and also provide variety of functions in well organize manner.
- Quick Access Toolbar: Display frequently performed actions like Add Job, Delete Job, Print Job, Pause or resume, Abort job, Check nozzle, Move left, Move right, Move forward, Move backward, Z Move Down, Z Move Up, Move carriage to origin, Move carriage to origin Y, Move carriage to origin Z, Measure Paper Width, Edit job and Roll or Flat, are available as buttons on the Quick access toolbar.
- Job Information: Display the properties of the selected job like File Name and Path, Status, Print Size, Print Area, DPI, Pass, and more.
- Job Preview: Show the job preview as well as print progress in this area.
- Job List: Displays the thumbnail preview of added jobs.
- Error message: Displays the system generated error messages.



Setting Menu

Setting Printer Move Preference Calibration Print setting Clean setting Color Bar Auto skip white 10.0 0 Space ÷ AutoClean ÷ * 1 ÷ + Step Time 1.0 CleanTimes Width 12.7 ÷ 0.0 ÷ PauseTimeAfterClean 4 Job Space Placement Both ¥ + CleanPosCorrect 0.0 Feather Type Gradient ¥ Normal 0 ≑ 🗌 Max ÷ Feather CleanLenCorrect 0.0 Color Mixed Multiple Ink Default ¥ Height same with image Spray setting Media + 0 AutoSpray Z Measure 0.0 ÷ х 10000 ÷ SprayPeriod Head to paper: 3.0 ÷ * Width 3300.0 Print Pre-spray Time 1.50 🚔 ÷ Detector length: 0.0 ÷ 0.0 ✓ Idle Spray Spray Before Pri Margin Print Direction Stable color order Mirror Print X Div: HighPrecision ¥ <u>0</u>K Cancel Fig 35: Displaying the Setting Window

The **<u>Setting</u>** window with the **<u>Printer</u>** tab is shown in the below image:



The **Move** tab is shown in the image below:

Printer Move Preference Calibration Move
Length: 25.4
(← Move X Speed: 4 → Move
Move Y Speed: 4 Move Move
Understand Z Speed: 4 ✓ Image: Speed: Image: Speed:
Stop

Fig 36: Displaying the Move Tab

The **<u>Preference</u>** Tab is shown in the image below:

Display in print array:		View mode:	Normal	9
 ✓ Name ✓ Status 	^	Language:	English (United States V	
Size Resolution Passes		Unit:	Millimeters V	
 Direction Copies 		Delete job a	ter print	
 Printed Passes Printed Date 	~	Delete file a	fter print	
		Beep before	print	

Fig 37: Displaying the Preference Tab

Note: Unit value can be changed using the <u>Unit</u> drop down list.



The **<u>Calibration</u>** tab is shown in the image below:

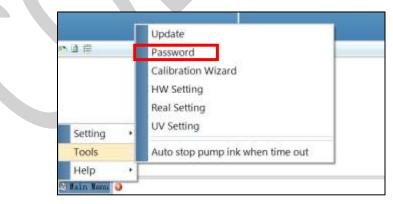
	- D-f	ence Calibratio		Set	ting			
ter Mov Horizo			Speed_720D	PI 🗸	Copy to	r I		
Bidirection	n 0							
Head	0 (K)	1 (C)	2 (M)	3 (Y)	4 (K)	5 (C)	6 (M)	7 (Y)
Left	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0
Step		4 Pass	~					
Revise:	0.00		> Ste	p 0	Bas	se Step	5706	
Vertic	al							
Head	0 (K)	1 (C)	2 (M)	;	3 (Y)		
Vertical	0	0		0		0		

Fig 38: Displaying the Calibration Wizard

Feeding Password

The Password option enables operator to feed password of the printer. On clicking **Password** option under the **Tools** menu, the **Password** window appears with two options viz. Time Password and Language Password. Let's learn to feed password in the machine.

Follow these steps to change the passwords of the printer:



Step 1: *Click* on the **Main Menu→Tools→Password** path, as shown below:

Fig 39: Selecting the Password Option



The **Password** window appears on the screen as shown below:

Time Password: CEE5 4F32 88DE 8B45 Set Language Password: 930B B9C9 EECA 1CC4 Set		Passwo	ord	×
Language Password: 930B B9C9 EECA 1CC4 Set	Time Password:	CEE5 4F32 88	8DE 8B45	Set
	Language Password:	930B B9C9 EI	ECA 1CC4	Set
Exit			Exit	

Fig 40: The Password Window

Step 2: Set values in the Time Password field as per the requirements (Refer to Fig 40).

Note: The length of the password field must be of 16 digits.

Step 3: After feeding the passwords, *click* on the Set button in front of both the options (Refer to Fig 40).

Step 4: Click on the Exit button to close the Password window (Refer to Fig 40).

Note: When **"First Warning"** appears, kindly contact Head Office with the following screen:

- Password Screen (Refer to Fig 40)
- About Us Screen



Fig 41: Displaying the First Warning Screen for Password



8. Printer Software Operations

Setting the Print Origin

Print origin sets the print starting point with the left limit switch as the reference point. It can be set by two ways; moving and positioning the carriage and typing the offset value directly in the given field.

Follow these steps to change the print origin:

Step 1: *Move* the carriage at the position from where you want to start the printing by *clicking* on the left and right buttons on the **Quick Access Toolbar**, as shown below:



Fig 42: Adjusting the Carriage Position

Step 2: After positioning the carriage, *click* on the **Set print origin** icon on the **Quick Access Toolbar**, as shown below:



Fig 43: Selecting the Set Print Origin Option

On clicking the **Set print origin** icon, the current position of the carriage gets updated in the **Origin X** text box, as shown below:



Fig 44: Displaying the Origin Value

Now, the printing origin gets set. Additionally, you can also enter the print origin value manually in the Origin X field under the Print Parameter section.



Print Head Calibration

The Print Head calibration is categorized into the following types:

- Mechanical Check: Includes Vertical Check and Angle Check
- Software Calibration: Includes Horizontal Calibration and Step Calibration

Let's discuss the above-mentioned checks and calibration one by one in details.

Note: Mechanical checks are performed by service engineer, thus these checks and their description are not included in user manual.

Opening the Calibrating Wizard

Print Heads should be calibrated to ensure good printing quality. To open the Calibration Wizard, *click* on the **Main Menu-Tools-Calibration Wizard** path, as shown below:

		Update		
	.	Password		
🛤 🖻 📰		DemoPage		
	×	Calibration Wizard		
	X	HW Setting		
	8	Real Setting		
Setting	•	Wave Form Setting		
Tools	Þ	Auto stop pump ink when time out	t	
Help	٠Ľ			
Main Menu	0			

Fig 45: Selecting the Calibration Wizard Option

This should bring up the calibration wizard which is shown below:

	Calibration Wizard	×
Mechanical Check Adjust head with tools.		8
Angle Check		
Vertical Check		
Nozzle Check		





When you press the **Next** button, we redirect to the software calibration screen, as shown in the below images:

				Set	ting			
rinter Mov	e Prefere	nce (Calibrati	on					
Horizo	ontal	High	Speed_720DF	י 🗸	Copy to ►			
Bidirection	n 0							
Head	0 (K)	1 (C)	2 (M)	3 (Y)	4 (K)	5 (C)	6 (M)	7 (Y)
Left	0	0	0	0	0	0	0	0
Right	0	0	0	0	0	0	0	0
Step		4 Pass	¥					
Revise:	0.00	-	=> Step	0	Base	e Step 5	5706	
Vertic	al							
Head	0 (K)	1 (C)	2 (M)	3	(Y)		
Vertical	0	0		0	0			

Fig 47: Displaying the Printer Calibration Options

Horizontal Calibration

Horizontal Calibration checks the bi-directional, left, and right alignment and corrects it by adding or subtracting the correction value from the default set value. It has to be performed for each print mode, whichever is required. Let's discuss each type of horizontal test one by one.

Bi-direction Calibration

Bi-directional calibration is performed to achieve dot placement accuracy between the "Left to Right" and "Right to Left" print sweeps. If the bi-direction offset value is correct, the Left to Right test print would align accurately with the Right to Left test print at"**0**" position. In case of error in the Bi-Direction offset, the Left to Right and Right to Left print would align at some other point on the scale.



The Bi-direction Calibration result is shown in the image below:

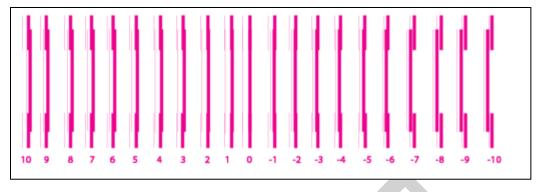


Fig 48: The Bi-Direction Calibration Output

Based on the above figure, you can notice that the Bi-direction calibration is good at **"0"** position. The correction value is **"0"** which means you need not to correct the bi-direction value. Sometimes, the correction value can either positive or negative. If the correction value is positive, then you need to add it in the current bi-direction adjust value or subtract the same if negative.

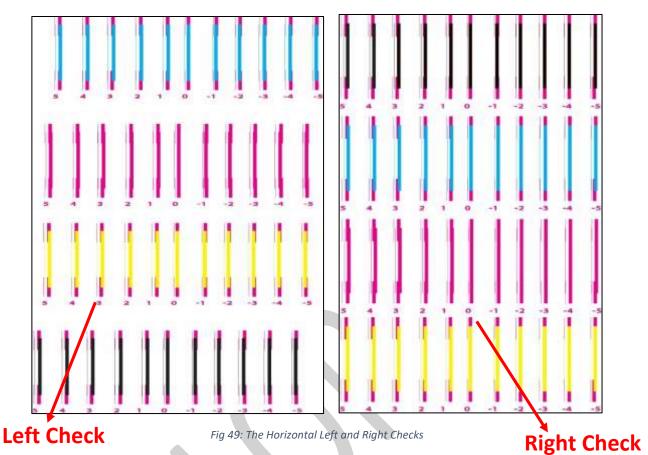
Left to Right and Right to Left Calibrations

Left to Right Calibration is performed to achieve dot placement accuracy of all colors (Black, Cyan, and Yellow) with respect to Magenta during the carriage's left to right print sweep. Similarly, Right to Left calibration is used to achieve dot placement accuracy during the carriage's right to left sweep.

When the position of the test head is correct, then it would align perfectly with the reference color at "**0**" position, indicating that the error position is "**0**". If the test Print Head's position saved in the system is inaccurate then it would not align at "**0**" position, but at some other point on the calibration scale. The position at which the test head aligns perfectly with the reference head, indicates the error in position.



The Left Calibration Result is shown in the image below:



Step Calibration

The printer step calibration is performed to verify and correct fabric feeding. The printer prints a complete image pass by pass. A pass is the horizontal carriage sweep perpendicular to the fabric movement. After each pass the printer moves the fabric forward for the next pass. This movement of fabric is called a step. The distance by which the fabric is moved is called the step size and it has to be accurate. Step size errors cause horizontal white or dark bands to appear in the print output. Step size needs to be adjusted for multiple factors like thickness and roughness of the print fabric etc. Step calibration should be used to fine adjust the step size and has to be done for each desired pass.

The Step Calibration result image is shown as below:

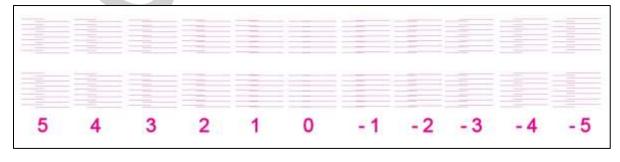


Fig 50: Displaying the Output of the Step Calibration



From the above figure, you get the accurate step adjust correction value. The correction value is either positive or negative. If the value is positive, then add it in the current step adjust value for the Print Head calibration. On the other hand, if the value is negative, then subtract the value from the current step adjust value. From the above, you can conclude that the pattern is corrected at **"0"** position.

The **<u>Step Calibration</u>** and its parameters are shown in the image below:

Step		3 Pass		~			
Revise:	0.00	•	=>	Step	0	Base Step	27000

Fig 51: The Step Calibration Parameters

Follow these steps to perform step calibration:

Step 1: Select the desired pass from the list and click on the Print button (Refer to Fig 51).

Step 2: Feed the correction value in the **Revise** field (the correction value up to two decimal places) (Refer to Fig 51).

Step 3: Click on the => icon (Refer to Fig 51) on the Step Calibration window. The correction value result will be reflected in the **Step** field (Refer to Fig 51). The same step value will also be displayed in the **Steps** field on the **Quick Access Toolbar**.

Setting Print Parameters

Using the Printer Manager, you can manually change print preferences as per the printing requirements such as print origin, printing speed, no of steps, and more as shown below:

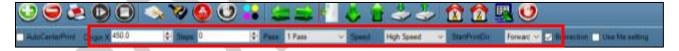


Fig 52: Setting Printing Parameters

The description of printing parameters is given as follows:

- **Origin X**: Directly enter the print origin value.
- **Steps**: Remove step size errors in the current print job by specifying number of steps.
- **Pass**: Choose the number of passes with which the print job should be printed. Increasing the number of passes improves the print quality but at the cost of printing time.
- **Speed**: Choose the printing speed like High Speed, Medium, and Low.
- **Medium Speed**: Set the Y printing speed viz. Standard Speed and Low.



Adding Jobs

There are two ways to add jobs in the Job List area viz. the Add Job button and right click on the Job List area. Let's discuss both the ways one by one.

Follow these steps to add jobs in the Job List area:

Step 1: *Click* on the **Add Job** button on the **Quick Access Toolbar**, as shown below:



Fig 53: Clicking on the Add Job Button

The **Open** window appears on the screen.

Step 2: *Navigate* to the location where the image file with extension "**.prt**" and "**.prn**" is stored (Refer to Fig 54).

Step 3: *Click* on the **Open** button to add the file into the **Job List** area, as shown below:

G	Open	
🔄 🏵 🔹 🕇 🚺 «	Local Disk (E:) → Onyx12 → Onyx Rip	✓ C Search Onyx Rip
Organize 🔻 New fo	older	
My Computer My Computer Desktop Documents Downloads My fur-pc) Music Powner (owner1) Pictures Videos Local Disk (C:) Cucal Disk (D:) Cucal Disk (E:)	 Name IMG_20170525_145505.prt IMG_20170525_145505.prt 	Select a file to preview.
File	e name:	✓ Rip Files (*.prn;*.prt)
		Open Cancel



🖄 Cologet Frister Manager Kjocera, K	NR 0300 Set 1N2x 2Head	4Coller						- 6	×
	ی 🔕 🕫 🜜) 🔐 🚖 🕷	6844	1 1					
Accessities Course 490.0	S Sec. 2	S for the	- Seed High Speed	- Served		(in the second			
Ready				152	1880a				
202.9x200.7 360x360 Normal 1. Paiss Unidirection									
C1/Dsars/CP/Desktop/ Meno Vficever.prt									
Rower, prt									,
P Type here to search	ñ	0 #	a 💀 🧿 8	0	9 8 8		× 4 96	0444 PM 65-02-2020	-

Now, the selected image appears in the Job List area, as shown below:

Fig 55: Displaying the Added Job and Their Details

Once a file has been added its information such as file path, size, resolution, and number of passes can be viewed in the Job Information area. User can also add a job simply by right clicking on the Job List area and selecting the **Add Job** option from the context menu, as shown below:

Add Job
Delete Job
Edit Job
Print Job
Abort Job

Fig 56: Displaying the Context Menu

On selecting the **Add Job** option, the **Open** window appears and follow the above-mentioned steps to add more jobs.

Note: To delete the selected job, *click* on the **Delete job** icon on the **Quick Access Toolbar**.



Editing Job

Follow these steps to edit the selected job:

Step 1: *Select* the job for which details you want to edit from the **Job List** area.

Step 2: *Right-click* on the selected job. The context menu appears on the screen.

Step 3: Select on the Edit option from the context menu, as shown below:

Add Job		
Delete Jo	b	
Edit Job		
Print Job		
Abort Job)	

Fig 57: Selecting the Edit Job Option

The Edit Job Form appears with the list of options viz. Clip, Reverse Print, and Tile.

Step 4: *Select* the desired checkbox in front of the Clip, Reverse Print, and Tile options. On clicking to any option, its related parameters get appeared on the right pane and you can edit them as per the requirements. In our case, we have selected the **Clip** checkbox.

Step 5: After making the desired changes, *click* on the **OK** button to apply the settings, as shown below:

2	EditJobForm	X
	Setting Preview Clip Tile	Copies
	X: 0.000 + Y: 0.000 + W: 158.4 + H: 37.493 + X: D.000 + Y Dis: 0.000 +	1
	FootNote Note Dis: 0.000 Job Size Resolution Pass Num Direction	Font File path
✔ Clip Reverse Print Tile C:\Users\Bhawna Upreti\Desktop		A
		~
	OK Cancel	





Similarly, you can click on any other option and its related options get enabled in the right pane of the Edit Job form.

Ripping and Printing

Ripping is an independent process which converts a raw image file into the machine-readable format and get the file ready for printing. The Rip software supports the tiff, jpeg, eps, psd, bmp file formats. After ripping the image file, the output file will be in ".prt" or ".prn" file format. Thus, you should first rip the image file before printing and then issue the Print command. While ripping, the color profiles are used to automatically perform the color corrections in the image.

You can print an image on the selected media simply by clicking on the **Print Job** button available on the **Quick Access Toolbar,** as shown below:



Fig 59: Issuing the Print Job Command

'Printer Manager' is the operating software for this printer which will be bundled with machine. For printing, there are two ways:

• If 'Print to file' is selected in the Rip Software, ripped files will be stored in the particular folder which has to be selected by clicking 'Add Job' in Printer Manager by locating the path. 'Use file setting' has be disabled in this case.



• Printing command can be given directly from Rip software, if the Rip software supports printer driver to simultaneously rip and print. 'Use file setting' has be enabled from the Printer Manager software.



After issuing the Print command, the printing gets started and its progress details displays in the Job Information area, as shown below:

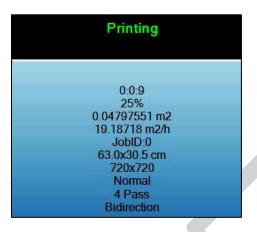


Fig 61: Displaying the Printing Details

DPI and Mode

There are different combination of print modes and resources, as shown through the table:

Print DPI	Print Passes
600x600	1
600x1200	2
600x1800	3
600x2400	4

Pausing and Canceling Printing

If you find any defect during the printing process, you can immediately pause or cancel the current printing job using the Pause or resume and Abort Job buttons available on the **Quick Access Toolbar** as shown below:



Fig 62: Issuing the Pause or resume Command

Similarly, you can abort the process by right clicking on the selected Job in the Job List area and select the **Abort Job** option from the context menu.



9. Head Cleaning

Print Head is a delicate part which needs to be cleaned as per the recommended methods to have long life and to ensure consistent print quality. Below sections give recommended steps to clean the Print Heads.

Head Blotting

Head blotting refers to the process in which the head surface area is cleaned for better printing result and quality. In Metro, auto wiping option is available to clean the head surface area.

The Auto Wiping option is shown in the image below:



Fig 63: Displaying the Auto Wiping Option

On clicking the **Auto Wiping** icon, the Manual Clean Form window appears on the screen, as shown below:

HanualCleanForm	oping Settings			- • ×
Wiper Enable	₽	Press Ink Time	5000	
Wiper Speed	10000	Wiper Pos	8000	
Wiper Clean Start	2000	Wiper Clean Time	2000	
Capping Enable	Г			
Auto Capping Time	15			
		Start	Stop	

Fig 64: Displaying Auto Wiping and Auto Capping Settings

The list of Auto Wiping and Auto Capping options is defined as follow:

- Wiper Enable: Enable the auto wiper functionality.
- Wiper Speed: Help in defining the wiper speed.
- Wiper Clean Start: Define the wiper cleaning position.



- Wiper Pos: Define the wiper position.
- Capping Enable: Enable the auto capping functionality.
- **Auto Capping Time:** Define the auto capping time. When the printer is ideal for the define time then auto capping process gets started and capped the capping station with the head plate.

Setting Wiping and Capping Height

Using the Setting window, user can set the wipping and capping height by updating values in the Z Clean Pos and Z Wet Pos list boxes, as shown below:

Z Move			
Z Max Len	7.0	-	
Head to paper:	2.0	-	
Media Thickness	0.5	-	
	ZMan	ual	
Z Clean Pos:	0.0	+	
Z Wet Pos:	0.0	÷	

Fig 65: Setting Wiping and Capping Height

Head Purging

Head purging refers to the method in which heads are cleaned by forcing pressurized ink through the nozzles. In the printer, head purging buttons for each color are available on the carriage.

Note: Please note that purging button should be pressed only for a second (until few drops of ink come out).

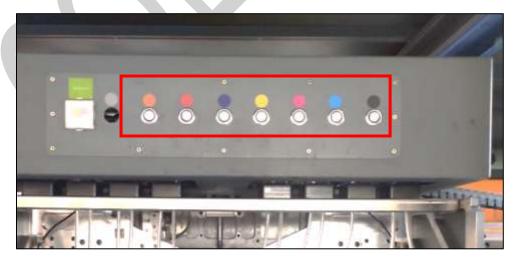


Fig 66: Displaying the Purging Buttons



Head Spraying

Head spraying should be performed only when small percentage of nozzles are blocked. This method is used to avoid mixing of colors. When heads are sprayed all the nozzles are actuated at a high rate which helps in opening up dry nozzles of the printer. To perform head spraying, *click* on the **Spray** button available under the **Quick Access Toolbar**, as shown below:



Fig 67: Displaying the Spray Button



10. Cleaning Tub Unit

Cleaning Tub Unit

Follow these steps to clean the tub unit:

Step 1: Lower down the tub using HMI and follow the below path:

Main Menu→ Ready To Print→Washing System→ Tub Out, as shown below:



Step 2: Loose Allen screws from both sides to remove the tub, as shown below:

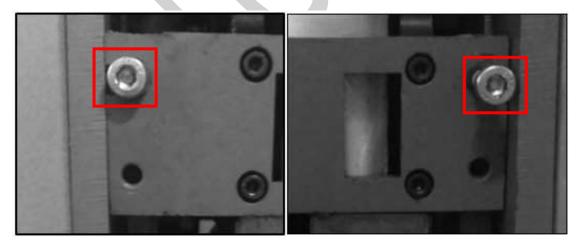


Fig 69: Loosing Allen Screws



Sponge Roller

Now, the tub comes out and user can start the maintenance work, as shown below:

Fig 70: Cleaning Tub

After completing the cleaning, reversely follow the above given steps to fix the tub.



Cleaning Jetting Nozzle

Jetting Nozzles are shown as below:

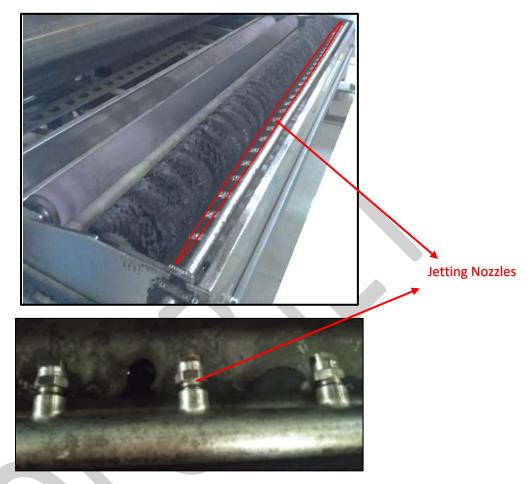


Fig 71: Displaying the Jetting Nozzles

To clean jetting nozzles, remove them using the 10mm spanner and clean it to remove any block.



11. Switch OFF Procedure

Note: Main MCB power must be ON.

Follow these steps to learn the switch off procedure:

Step 1: Perform the Nozzle Test to check Print Head nozzles status.

Step 2: Clean the Print Heads, if required.

Step 3: Remove the media from the machine.

Step 4: Clean the Capping Station area and check the water in the Capping tray.

Step 5: Click on the **Auto Capping** icon to engage capping station with the head plate using the Printer Manager, as shown below:



Fig 72: Displaying the Auto Capping Option

Note: Never move the carriage manually over elevated capping station.

Step 6: Close the Printer Manager software.

Step 7: Turn OFF the printer using the Power or Emergency button.

Step 9: Cover all the printer.

Now, the printer is switch off.



12. Do's and Don't

<u>Do's</u>

- 1. Keep the room dust free and maintain the temperature between 25°C and 28°C
- 2. Water filter plates should be fitted when jetting pump is on
- 3. Always care about the wrinkles on fabric, it may damage the Print Heads
- 4. Conveyor belt shifting has to be monitored regularly and also adjusted with the help of adjusting roller
- 5. Maintain the water level in the water tank and refresh water every 3-4 hours
- 6. Add 2 spoons of **Caustic Soda** in every water recycle in tank
- 7. To avoid air in head pipes, always maintain the ink level more than 1 Liter in the main tank and wipe the Print Heads immediately after purging
- 8. Water tank filter plates should be cleaned every hour to remove stuck threads and also to avoid overflow
- 9. Always use the clean and fresh water for washing system for longer life of related parts
- 10. It's time for tub maintenance, if:
 - a. Jetting pipe have choked nozzles
 - b. When brush roller is filled with threads
 - c. When sponge roller is not moving and has become slippery
- 11. When belt has shifted out of the roller
 - a. Do not give next print command
 - b. Remove fabric from the belt
 - c. Move the belt in the reverse direction with the help of Glue Cycle
 - d. After belt is in center, adjust the shifting control knob/roller slightly as taught

Don'ts

- 1. Don't wipe (only blot) the Print Head with tissue paper or cloth piece as it may damage the head nozzles
- 2. Never remove the water filter plates, when jetting pump ON
- 3. Never keep the printing continue, if the belt has shifted more
- 4. Don't run the belt without jetting ON
- 5. Don't run the jetting pump when water tank is empty
- 6. Don't switch OFF the printer without making the tub down
- 7. Don't leave the Print Heads without capped
- 8. Don't move the carriage over the Capping Station when printer is OFF and capping is in UP position
- 9. Don't print when glue layer is not smooth/peeled OFF



13. Maintenance

Print Head Maintenance

Print Head is an important and delicate part of the printer. Thus, it must be handled with care to ensure the long life of the Print Heads. For Print Head maintenance, the following instructions should be taken care:

- Perform the nozzle test daily 2-3 times before printing to monitor the blockage in the head nozzles.
- Avoid head damage due to fabric and Print Head confliction.
- Capping station should be cleaned.
- Capping station should be wet to avoid Print Head dryness with solvent.
- Colorbar should be ON.
- Avoid ink spilling on the Print Head and head cables.
- Head cleaning roller has to be kept dip into the clean RO-water tray and squeezed before cleaning. Moreover, cleaning should be done only single time, i.e. it has to be cleaned and squeezed to reuse next time.
- Purging station area should be cleaned frequently.
- Degassing pressure has to be monitored regularly and it should be in between -75 to -95KPa. In case, degassing pressure is not maintained, then it may cause the nozzle blockage.
- Humidifier has to be always in working condition, which keeps the head nozzles wet and open.
- Carriage cover should always be fixed to protect electronics, after head maintenance.
- Don't use expiry ink and store the ink at favorable environment

Precautions:

- Don't wipe Print Head nozzles with tissue paper or any piece of cloth, as it damages Print Head and nozzle plate.
- Don't use wear out head cleaning roller and replace it, when required.
- Color bar should always be enabled while printing.
- Idle spray should always be enabled with 10000 value.
- Avoid ink spilling on the Print Head and Head Cables.
- Uneven or partly peeled off glue coating on belt may damage the Head Nozzle Plate.
- Don't use wrinkled or non-ironed fabric roll, as wrinkle on fabric can cause accidents like entangling of fabric with head base.

Belt Maintenance

Conveyor Belt is an important part of the printer, thus belt and it's position should be monitored time to time and always be running well inside the rollers.

Centering of Belt

This section explains how to control the movement of the Conveyor Belt as it must run in the center. If the belt is shifting more than 5mm in 1 hour toward a side, then one should follow the below given instructions:



- a) Wait for the completion of the current printing process. If the print command repeats, then immediately stop giving the next print command for printing.
- b) Takeout the fabric, lower down the tub, and run glue cycle in reverse direction with the 70% speed.
- c) Rotate the Belt in the reverse or opposite direction until it comes in the Center. Once the belt has positioned centrally, stop the glue cycle. Now, the shifting control adjustment has to be done as mentioned further in next section.

Belt Shifting Control

Follow the below given instructions to control the conveyor belt shifting:

- Belt shifting can be controlled 'on the fly' as well as when print is stopped.
- To control belt shifting, move the Shifting Control knob in the required direction.

Glue Coating Layer

- It is strictly recommended that the Company suggested glue has to be used, otherwise it may cause damage to the sponge rollers, conveyor belt, brush motor assembly, and belt motor coupling.
- Glue coating has to be checked from time to time for its adhesive strength. Whenever required, fresh coating is to be done. Also wiping with wet cloth can clean the previous coating layer sometimes.

Precautions:

- If the glue layers are peeling off partly, it may harm the print head and also results in printing wastage.
- If Glue adhesion goes less, it can damage the print head as the fabric gets entangled with the Print Head during printing.

Environmental Maintenance

- Room temperature should be maintained in 23-28-degree Celsius range with humidity 60-80%RH
- Closed dirt-free room exclusive for Printer
- Proper cool with white lightings

Daily Maintenance

- Renewal of water is done every 4 hours in the Water tank.
- Add 2 spoons of caustic soda in every water recycle.
- Keep the Capping Plate surface clean, particularly before capping.
- Wiper blades should be cleaned using water rinse.
- Run the Wash Cycle after finishing each fabric roll and also remove the fabric thread, if any.
- Check the Waste ink bottle and empty it, if required.
- Clean the purging tray daily.
- Check ink level in Main ink tank and refill it, if empty.
- Maintain the recommended air pressure.
- Belt shifting should be regularly monitored and adjusted, if required.



• Press roller and fabric guiding rollers should be wiped daily to remove the ink stains.

Precautions:

- While Print engine off and capping elevated, never move the carriage over the capping station
- Always pour distill water in the Capping tray to avoid germs

Weekly Maintenance Washing Tub Maintenance

Washing Tub is an integral part of the Printer. Its maintenance is equally important as the production job work. The timely maintenance increases overall productivity by minimizing the downtime of machine and increases the life of the tub related parts.

- Whole tub unit should be cleaned thoroughly.
- Water tank, jetting pipes, brush roller and refreshing tank water should be cleaned frequently to prevent from fabric threads, mold or algae choking the water flow in the tub, and its related parts.

Precautions:

- Tub should always be lowered before turning off the machine.
- Don't run the Wash Cycle while Jetting Pump is OFF.
- Don't run the Wash Cycle until the glue gets dry (after glue coating, wait for 3 or 4 hours).
- Always use the cleaned RO processed water for washing system.
- Don't forget to clamp the water pipes before starting the Wash Cycle.

Tub Removal Steps for Maintenance:

- Remove the tub front covers.
- Lower down the tub using HMI and follow the below path: Main Menu→ Ready To Print→Washing System→ Tub Out.
- Loose Allen screws from both sides to remove the tub. Now, the tub comes out and clean it using fresh clean water.
- Pull out the trolley to start the maintenance work.
- After completing the cleaning, reversely follow the above given steps to fix the tub.

Cleaning points:

Note: Use water to clean the washing tub, don't use any chemical or detergent.

- Comb the Brush to remove fabric threads, and thoroughly wash to remove Glue residue layer on it.
- Sponge rollers should be rinsed and squeezed simultaneously.
- Check the Jetting Pump for any choked pieces in its inlet.
- Clean the Jetting Pipe nozzles thoroughly to get rid from fabric threads.
- Clean the Water Tank filter plates with the hard brush to remove stuck threads.



Computer Storage Management:

- Remove unwanted files from your computer to maintain a minimum of 10GB free space in hard disk.
- Remove unwanted programs and old ripped files from the computer to improve the speed of printing.

Monthly Maintenance

- LM guide should be wiped monthly.
- Cleaning the floor particularly the area near the water tank and washing tub.
- Encoder strip should be cleaned gently with wet tissue paper, on weekly basis.

Metro (Kyocera Head)



14. Troubleshooting

Printer Not Initializing

- Emergency button is pressed
- Capping unit is in up position
- Print engine is OFF
- Main Board is faulty
- Encoder sensor is not connected to HB
- Limit switch is disconnected from MB

Jetting Pump Not Working

- Jetting pump float is down
- Water is less in the Water tank
- Not enabled from HMI
- Make sure belt is in motion and pump stops when belt is idle
- Jetting pump is having air lock /clog by foreign materials
- Pump is failure
- Pump fuse is blown

Water Seepage in Belt

- Tub is brought down and up during pause (in between print)
- Sponge roller is turn OFF/ shape is distorted
- Glue dryer is OFF

Belt Shifted

- Shifting is not monitored and arrested through the Shifting Control wheel
- Shifting control knob is rotated incorrectly or excessive

Negative Pressure Drop/Not Working

- Adjust negative pressure using Negative Pressure switch meter
- Meniscus vacuum switch is OFF
- Negative Pressure switch program is disturbed
- Ink overflowed from sub tank and filled in the reservoir
- Vacuum is not generated by pump (pump failure)
- Any ink/air tube is having leakage/cut/loose on fitting joints
- Vacuum pump connector is loose/open from relay

Fabric Not Sticking to Belt

- Glue heater is not ON or not working
- Glue coating layer needs the new glue coating
- Belt layer is full of dust/threads need manual cleaning/wiping

Print Not Drying/Ink Marks on Back of the Fabric

- Print dryer is not ON or not working
- Dryer temperature is not sufficient



- Coating of fabric is not correct
- Fabric supporting bar and Take Up roller is stained with ink

Ink Not Filling

- Main tank is empty
- Ink pipe is having cut/bend
- Ink pump is not working/connector loose/open
- Sub tank float connector is loosely connected to the headboard
- Sub tank float is not working

Fabric Not Peeling OFF

- Takeup Motor power is not ON
- Dancing bar weight is less
- Core is slipping and not intact with air shaft
- Fabric is not sticked to the core

Impression of ink on plain fabric

- Belt is not washed properly
- Water in the tank is dirty and have fabric lints
- Fabric threads are sticked over the belt
- Brush is congested with fabric threads and not uprooting the threads from the belt

Printer Manager Not Showing "Ready"

- USB is disconnected from computer or loosely connected
- Print engine is OFF
- Main board is faulty
- USB cable is faulty

Print Stops in Between Printing

- USB cable is loose / faulty
- Image files are heavy in size
- Ground wire is disconnected
- Encoder scale is having ink stains/scratches
- Ripped file is having error

Print is Shifting wrt Fabric/ Junk Printing

- Encoder scale is having ink stains (print shows vertical color bands)
- Encoder sensor is not clean
- Fiber optical cable is faulty

Print is Blur

- No proper calibration viz. bi-direction and step
- Head height is disturbed and not calibrated for above
- Incorrect resolution is selected
- X div is selected "High Speed" instead of "High Precision"



Lines in Prints

- Nozzle blocked in heads (check nozzle test)
- Incorrect feed step (calibration required)
- Belt motor coupling loose

Metro (Kyocera Head)



India's largest manufacturer of Digital Inkjet Printers

For Any Query

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