

ECOFREEN®

MiSTER-T2

OPERATOR'S MANUAL



Automatic Pretreat Spray Machine

www.ecofreen.com

Safety Instructions

For Use By Qualified Personnel Only

When using your machine,
basic precautions should always be followed,
including the following:

Read all instructions.

Use the Mister T2 only for its intended use.

Mister-T2 has to be operated with a precoating liquid for fabrics for DTG printer. Cleaning **MUST** be done with distilled water only! Other liquids alcohol or solvent may damage pumps or other components of the machine. Damages caused by unauthorized liquids are excluded from the warranty.

Mister-T2 comes with 12 months warranty. This warranty includes the whole construction of the machine, mechanical parts, electronics, drawer with rails, casing, pumps, electronic valve and pipes Consumption items such as stainless steel nozzles, seals, and filters are excluded from the warranty.

The set-up and installation of the machine has to be done under supervision of an authorized person. The installation has to be done by 2 or more persons following the instructions of this manual.

Caution: The Plug has to be pulled out of the power outlet while maintenance.

Never pull cord to disconnect the power, grasp plug and pull to disconnect from power outlet.

Protect the power cord by keeping it away from hot surfaces. Do not allow objects to sit on top of the cord. This could cause damage to the cord and could become a fire hazard risk.

Do not operate machine with a damaged cord or if the equipment has been damaged. Do not disassemble or attempt to repair the machine to prevent risks to injury. Call or take it to a qualified service person for examination and repair. Incorrect assembly or repair could increase the risk of fire, electric shock, or injury to persons when the equipment is used.

Supervision is necessary for any machine being used by or near children. Do not leave equipment unattended while connected.

Care should be taken to arrange the cord so that it cannot be pulled or tripped over.

To reduce the likelihood of circuit overload, do not operate other high voltage equipment on the same circuit.

The machine should only be used by trained personal after reading and understanding of the manual.

Table of Contents

Congratulations on your purchase of a MiSTER-T2 pretreat Machine!

In order to work professionally with the machine and start production, please make sure you read this manual carefully.

Reproduction of this manual requires written consent.

Errors and amendments of technical details excepted, all rights reserved.

We are not liable for any direct or indirect damages caused by the use of this product.

Table of Contents

Machine Parts Diagram	4
Specifications	5
Installation	6
Operating Instructions	
Control Panel	9
Operation	10
Pretreatment Guide	
Switching the Pretreat Liquid.....	11
Pretreating a Shirt	12
DTG Fixation Guide	13
Volume Chart	14
Maintenance (Important)	15
Other Settings	
Angles of Nozzles	20
Preset	22
Cost of Pretreat Liquid	24
Setting Mode for Other Setting	25
Trouble Shooting	26
Warranty Information	27

MiSTER-T2

Machine Parts Diagram

<FRONT>



<BACK>



MiSTER-T2

Specifications

Specifications



Dimensions	560mm(W) x 800mm(L) x 590mm(H)
Weight	40kgs
Platen Size	40cm x 50cm (16" x 20")
Number of Spray Nozzle	Two Nozzles
Maximum Spray Area	40cm x 50cm (16" x 20")
Spray Cycle Time	3 sec ~ 9 sec, by 10 to 99 speed
Power Supply	Free Voltage (100V~240V 50/60hz)
Power Consumption	60W
Packing Size	670mm(W) x 935mm(L) x 840mm(H)
Packing Weight	50Kgs
Liquid Consumption	With Minimum Speed : about 85ml With Maximum Speed : about 12ml

MiSTER-T2 Installation

Installation

Gently open the top of the machine and find the accessory box inside of the machine and please check if all the components are in the box.



1) MACHINE LEVELING

Please ensure the machine is properly placed and leveled. Otherwise waste liquid in the machine can leak.

To level the machine, turn the machine feet clockwise to decrease height and counter clockwise to increase height.



2) ASSEMBLY

Please fine the bottle holder and 6 screws in the accessory box and assemble the bottle holder as the picture on the right.



MiSTER-T2 Installation

Installation (Continued)

3) CONNECT THE POWER CORD

The power switch and the power connection is located at the back of the machine.

4) CONNECT THE WASTE TANK and DRAIN TUBE

The drain connector is located at the back of the machine.

Connect the large tube (drain tube) to the connector on the bottom and then place the other end in an waste tank.

This will collect any excess pretreatment when the machine run.



5) PREPARE A BOTTLE WITH PRETREAT SOLUTION

If using ECOFREEEN UNIVERSAL concentrate, mix the liquid and purified water as below.



● Universal 1L + Water 2L = 3L for DARK or Blended

● Universal 1L + Water 1L = 2L for POLY

6) Nozzle Alignment

Do NOT make the two nozzles horizontal as the picture on the right.

Otherwise, sprayed pretreat liquid will be overlapped in the middle of the T-shirts.



Please make sure the nozzles alignment as the picture on the right.



MiSTER-T2 Installation

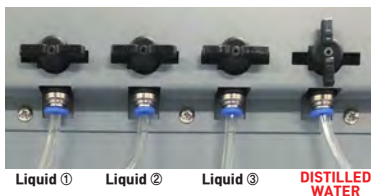
Installation (Continued)

7) PUT THE FILTERS INTO THE BOTTLES

Please put the filters into the bottles for pretreat liquid or water as below.



Please turn the valve clockwise to open the preferred valve to spray the liquid or water.

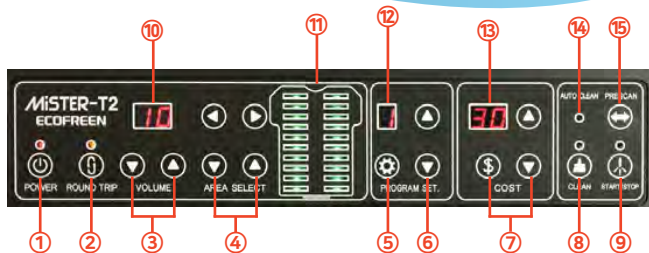


! IMPORTANT

- The water bottle should be placed in the 4th valve as the picture above.
- Only one valve can be open at a time.
- Flush with distilled water after daily use.
- Inlet Filter must stay submerged at all times.

Operating Instructions

Control Panel



Understanding the Control Panel Menu

- 1) POWER ON/OFF BUTTON
- 2) ROUND TRIP BUTTON : Spray pretreat liquid with bi-direction when the light above is on. Otherwise, it sprays with uni-direction only.
- 3) VOLUME BUTTON : Freely adjustable the volume of liquid (about 12~85ml).
- 4) AREA SELECT BUTTON : Freely adjustable the spray area. (Please refer to the page 10 for the example of setting the spraying area.)
- 5) PROGRAM SETTING BUTTON : Setting for preset options.
(Please refer to the page 23 for how to set the options above)
- 6) PRESET OPTION SELECT BUTTON : 9 options can be saved and retrieved. (from 1 to 9 options)
- 7) COST SETTING BUTTON : Setting the cost of pretreat liquid for each spraying.
(Please refer to the page 24 for setting the cost of liquid)
Also, for setting the unit for ink & currency, period & time for auto cleaning system.
(Please refer to the page 25 for how to set the options above)
- 8) NOZZLE CLEANING BUTTON
- 9) START / STOP BUTTON : Spray or stop the pretreat liquid.
- 10) DISPLAY for SPRAYING VOLUME (10~99).
- 11) DISPLAY for SPRAYING AREA.
- 12) DISPLAY for PRESET OPTIONS (option # from 1 to 9).
- 13) DISPLAY for COST of LIQUID for EACH SPRAYING.
- 14) AUTO CLEAN LAMP : Automatic spray for 2 seconds in every 4 hours when power is off.
(Please refer to the page 25 to program the time for the cycle.)
(The main power switch on the back of the machine must be turned on for the automatic cleaning system.)
- 15) PRESCAN BUTTON : Preview the spraying area by laser.

Operating Instructions

Operation

1) Turn on the **POWER SWITCH** on the back of the machine.



- * Ensure the emergency button on the left side of the machine is not locked.
If the emergency button is locked unlock by turning the button clockwise.



2) Press the **POWER BUTTON** on the control panel to start the machine (Press and hold for a few seconds)

- * There are 2 ways to operate the machine by preset or by setting each options. *

• Operation by Retrieving the Preset

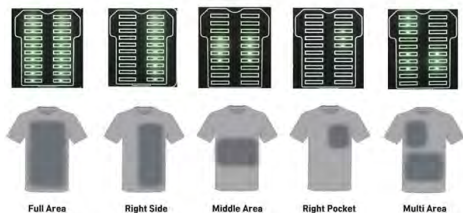
Press  &  buttons to retrieve the preset options which are already saved. (please refer to the page 22 to program preset options)



• Operation by Setting Each Options

- SELECT SPRAYING DIRECTION** : Press ROUND TRIP BUTTON to control whether the machine does unidirectional spray or bidirectional.
When the round trip light is on, the machine will spray bidirectional.
If the light is off, the machine will spray unidirectional.
- SELECT SPRAYING VOLUME** : Choose from 10 to 99.
* Please refer to the volume chart on page 14.
- SELECT SPRAYING AREA** : Change the area
Spray area is divided into 10 sections and only sprays on the selected area.
The area can be freely adjustable as below.

Example of Setting Spraying Area



Full Area

Right Side

Middle Area

Right Pocket

Multi Area

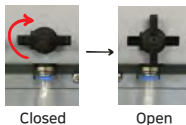
Operating Instructions

Operation (Continued)

6) BOTTLE SELECT

Switch the bottles by turning the desired valve in clockwise.

* Only ONE valve can be open at a time.



7) CLEANING

When you change the bottle to another (to different liquid), please press "CLEAN" BUTTON.

WARNING

IF YOU USE MULTIPLE COATING LIQUIDS, CHEMICAL REACTION MAY OCCUR WHICH CAN BE THE REASON FOR THE NOZZLES TO BE CLOGGED

Please clean the tubes and nozzles with water in valve #4 in order to flush the tubes of the previous liquids before switching to another liquid.

This will prevent any clogs that may occur due to chemical reactions.

8) START / STOP

Press the START BUTTON to start spraying your shirts with pretreat. Also press button again to STOP if needed.

Switching Pretreat Solutions

- When switching between pretreat solutions, close the valve by turning the valve in counterclockwise and open the 4th valve which should be filled with water for cleaning.
- Press the "CLEAN" button. Let the machine spray until you see no pretreat solution in the tube (7~10 secs).
- Close the 4th valve (distilled water) and open the preferred valve. Press "CLEAN" button to flush out the water (7~10 secs). Once you see the tubes filled with pretreat solution, press "CLEAN" button again to stop spraying/flushing.

Pretreating a shirt

Use the Recommended Spray Volume and Fixation Temperature.

1. Please prepare all equipment to be turned on. **Turn on the machine.**
2. If pretreatment is already loaded in the tubes, skip steps 2 & 3.
Press the clean button to ensure that **the pretreatment solution is loaded into the tubes**. This usually takes about 7~10 seconds.
3. Once you see the machine spraying the pretreat solution, press clean button again to stop the spraying.
4. It is recommended to prepress your shirt on a heat press for 5 seconds to get rid of any wrinkles before spraying. **Load your shirt**. Tuck the sides of the shirts in the platen to avoid getting it caught in the railings.
5. Ensure you have **set the appropriate volume and spray direction settings**.
The spray setting guide can be found on Page 13 & 14 of this manual.
Press the start/stop button to start spraying once you have your shirt and settings set.
6. **Place the pretreated shirt on the heat press to dry**. Place a heat-resistant release sheet, such as Teflon/Silicon sheet between T-shirt and the heat press.

* Use the following settings to dry the shirt.

The below settings are to be used as a guide. Some adjustment may be necessary.

- DARK COTTON : 320F ~340F (160C ~170C), 60~70 sec.
- BRIGHT COTTON : 320F ~340F (160C ~170C), 35~45 sec.
- POLY : 320F ~340F (160C ~170C), 90 sec.

If the shirt is not dry after the recommended time, repress the shirt until dry.

* Pretreatment Note

Different brands and types of shirts will require different amounts.

Start with the recommended amounts on page 14 and adjust accordingly.





Some testing may be required for new styles and brands of shirts.

It is recommended to keep a record of how much is required for each brand/type of shirt.



Pretreatment Guide

DTG Pretreatment & Fixation Guidance

• Heat Press Setting for Pretreatment

				
Garment	Bright Cotton	Dark Cotton	Poly	Blended (Hoodie)
Quantity	10-20g	20-35g	30g	50g
Volume Level on Mister-T2	Volume Level 10~30	Volume Level 10~20	Volume Level 20	Volume Level 50
Spraying Direction on Mister-2	Uni-Direction	Bi-Direction	Bi-Direction	Bi-Direction
Time	35-45 seconds	60-70 seconds	90 seconds	90-120 seconds
Temperature	320-338°F (160-170°C)	320-338°F (160-170°C)	320°F (160°C)	320-338°F (160-170°C)
Pressure	7.0-8.0 Bars 101-116 PSI	7.0-8.0 Bars 101-116 PSI	7.0-8.0 Bars 101-116 PSI	7.0-8.0 Bars 101-116 PSI

• Ink Heat Press Curing Setting

				
Time	45-55 seconds	90-100 seconds	90 seconds	90-120 seconds
Temperature	320-338°F (160-170°C)	320-338°F (160-170°C)	320°F (160°C)	320-338°F (160-170°C)
Pressure	1.0-2.0 Bars 14-29 PSI	0-1.0 Bars 0-14 PSI	0-1.0 Bars 0-14 PSI	0-1.0 Bars 0-14 PSI

Note) The above conditions subject to change depending on the fabric type. Please start with the recommended amounts he liquid above and adjust accordingly.

* Dilution Guide for T-PRT-UNIVERSAL



Universal 1L + Water 2L = 3L for DARK or Blended

Universal 1L + Water 1L = 2L for POLY

MiSTER-T2

Pretreatment Guide

Volume Chart of MiSTER-T2

* VOLUME CHART		10	20	30	40	50	60	70	80	90	99
 Uni-Direction Spray	White Thin	12ml	15ml	19ml	23ml	26ml	29ml	33ml	36ml	40ml	43ml
	White Thick										
 Bi-Direction Spray	Bright Color										
	Black Medium & Thick										
	Black Thin	26ml	30ml	37ml	44ml	50ml	57ml	65ml	72ml	78ml	85ml
	Black Medium										
	Black Thick										
	Black Super Thick										
	Hoodies										

The above are general guidelines on the speed and setting to use the pretreat your shirts.

Please note that some adjustments may be needed depending on the pretreat solution you use.

If shirts are not dry using the recommended heat press settings, please repress the shirt until it is completely dry before printing.

Not all shirts will be the same, so we highly recommend you do testing on any new shirts you pretreat before going into commercial production.

* The volume of the pretreat liquid showed on the display is provided for general information purposes only. It does not represent the accurate volume of the liquid.

ECOFREEN will have no responsibility for the accuracy of the data and the issue which may arise from using or relying on the information.

MiSTER-T2

Maintenance

Scan the QR CODE for the video !



DAILY MAINTENANCE

- ✔ Press "CLEAN" button to **flush with water and clean the nozzle everyday** at the end of work.

- ✔ **Never leave the filter exposed to air** to prevent filter from drying and clogging.

Always put the filter into the pretreat or cleaning water container.



MONTHLY MAINTENANCE

- ✔ **Please replace the filter every two months.**

Otherwise, filter will get clogged and unable to suck enough liquid, which causing inconsistent spraying.

[IMPORTANT NOTE]

Running the machine without filter will cause the damage of pump, solenoid valve, nozzle and inconsistent spraying.

The warranty will be void if the machine runs without placing the filter.

- ✔ **Please replace the sponge in capping station every two months.**

Otherwise, dried liquid on the sponge will cause the damage of nozzle and make it clogged.

IMPORTANT

- ✔ Try to **keep the main power switch on.**

This will enable automatic cleaning program which is purging for seconds by every 4 hours when not in use.



DAILY MAINTENANCE : Cleaning at the End of Work (Step 1 + Step 2)


Step 1. Collecting Remaining Pretreat Liquid

- 1.) Take out the filter from the bottle of pretreat liquid.
(Make sure to turn the valve on, otherwise filter will be unable to suck the liquid)




- 2.) Open the top lid and place the empty bottle underneath the left side of the nozzle.



- 3.) Press and hold "CLEAN" button  for "3 seconds" until you hear a beep. Then, the pretreat liquid will be flushed out of the machine. Let it spray until most of pretreat in the tube to be empty (about 7~10 secs).




- 4.) Press "CLEAN" button  once again to stop spraying. Then, the red light above "Start/Stop button" will be turned on, meaning that the right side of the nozzle is ready to be cleaned.



DAILY MAINTENANCE : Cleaning at the End of Work (Continued)

5.) Place the empty bottle underneath the right side of the nozzle.



6.) Press and hold "CLEAN" button  for "3 seconds" until you hear a beep. Then, the pretreat liquid will be flushed out of the machine. Let it spray until most of pretreat in the tube to be empty (about 7~10 secs).




7.) Press "CLEAN" button  to stop spraying of the right nozzle.

Step 2. Flushing with Distilled Water

8.) Close the top lid and put the filter into the distilled water to clean the tube.



9.) Press "CLEAN" button  to clean the machine with distilled water and let it spray until all the tube inside of the machine will be cleaned by distilled water (about 30 seconds).

MiSTER-T2

Maintenance

Cleaning The Nozzle

Step 1 : Press POWER ON/OFF BUTTON on the control panel to switch off.

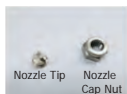
Step 2 : Open top lid.



Step 3 : Turn the Nozzle Cap Nut to counter-clockwise to loosen and dislocate the nozzle.



Step 4 : Clean the Nozzle Tip, Cap Nut and Sol Valve using water and wet paper tower.



Reference

The nozzles can be cleaned in an ultrasonic cleaner. To clean the nozzle and its parts, please fill distilled water and run it for 6~7 mins.



Storage

NEVER LEAVE THE NOZZLES EXPOSED TO AIR. Remaining precoat can be dried out and stick to nozzle. This will cause inconsistent spraying or clogging of the nozzle.

Cleaning The Nozzle (continued)

Step 5 : Assemble the Nozzle Tip and the Nozzle Cap Nut as the picture on the right.



CAUTION

When assembling Nozzle Tip after disconnecting and cleaning the nozzle, Please make sure the Nozzle Tip's alignment.

Failure to do this will result in the pretreat not being sprayed properly on the shirt.

Please make sure the nozzles alignment as the picture on the right.



Filter Maintenance

NEVER LEAVE THE FILTER EXPOSED TO AIR.

Doing so will cause the filter to be clogged.

The filter is a consumable part and will need to be replaced every two months.

If your machine is not spraying liquid, check to see if the filter is clogged.

Simply removed the filter from the end of the inlet tube and start spraying.

If spraying occurs after the filter is removed, then we can conclude filter is clogged and will need to be replaced.

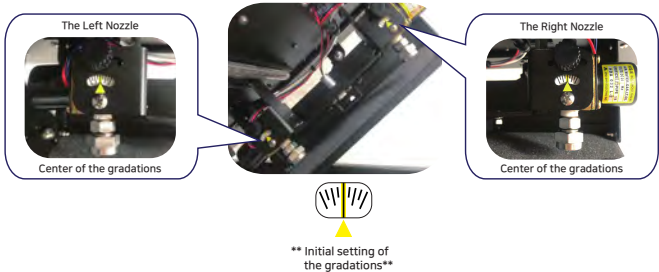
MiSTER-T2

Other Settings

How to Adjust Angles of Nozzles

1) Open the top lid and check the current angles.

The graduations are marked as the picture below.



2) Adjust the Angles of right and left nozzles.

Turn the angle adjuster to counter-clockwise to loosen and adjust the angles.



Set the desired angle. Then, turn the angle adjuster to clockwise to fix the angle.



Described in the next page...

MiSTER-T2

Other Settings

How to Adjust Angles of Nozzles (continued)



< Initial setting of the angle (center) of both nozzles >



< After adjusting the angles >

How to Create Preset Options

1) SELECT PRESET

Select which preset # you would like to program (1~9)

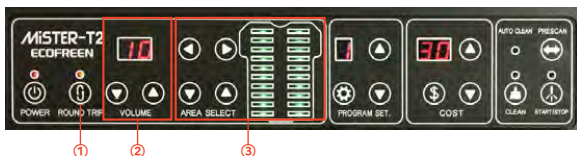


2) ENTER THE PRESET MODE

Press and hold "setting" button  on the control panel for 3 sec.

The LED inside of the machine will be turned off and the numbers on the display will be blinking. Then, spraying direction, volume, and area can be programmed.

3) SET THE OPTIONS



① Spraying Direction

Select uni-direction or bi-direction. It will spray pretreat liquid with bi-direction when the light above is on. Otherwise, it sprays with uni-direction only.

② Spraying Volume

Select the volume of liquid (10~99)

* Please refer to the volume chart on page 14.

③ Spraying Area

Freely select the spraying area.

Described in the next page...

Other Settings

How to Create Preset Options (Continued)

③ Spraying Area

- Full, Middle, Side Pocket Area



Step 1. Select start area and press button to save.

Step 2. Select end area and press button to save.

Step 3. Press button **twice** because there is no need to set "the section 2" like multi area below.

- Multi Area

Step 1. Select start area of section 1 and press button to save.

Step 2. Select end area of section 1 and press button to save.

Step 3. Select start area of section 2 and press button to save.

Step 4. Select end area of section 2 and press button to save.



The Start Area → → The End Area → → The Start Area → → The End Area


Section 1

Section 2

How to Create Preset Options (Continued)

4) EXIT THE PRESET MODE

After setting spraying area, the nozzles automatically go back to the start point and ready to be operated.

If the control panel are still blinking, press and hold "setting" button  on the control panel until you hear a beep.

Once the LED inside of the machine is turned on and nothing on the control panel is blinking, **MiSTER-T2** is ready to be operated.





5) RETRIEVE THE PRESET # and SPRAY

Retrieve the preset and press "START/STOP" button

How to Change the Preset Options

After you have programed the preset options(1~9), you can overwrite any previously saved settings by following the same process on the page 22 ("How to Creat Presets").

Setting the Cost of Pretreat Liquid



- 1) Press  button to change the cost of pretreat liquid.
- 2) When the numbers on the control panel (red box on the right) are blinking, press  and  buttons to set the cost.
- 3) After setting the cost, press  button to save the setting.

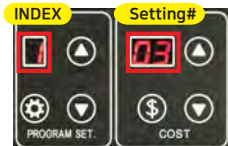


* The cost of the pretreat liquid showed on the display is provided for general information purposes only. It does not represent the accurate cost of the liquid. ECOFREEN will have no responsibility for the accuracy of the data and the issue which may arise from using or relying on the information.

SETTING MODE

1) ENTER THE SETTING MODE

Simultaneously press and hold  and  button in the COST section on the control panel until **both the numbers** on the control panel (red boxes on the right) are blinking.



2) SET the EACH OPTIONS AS DESIRED

Refer to the table below and set the each options as desired.

	Setting #	1	2	3	4
Index #	Classification				
1	Unit for Ink Bottle	1 Gallon (3.78L)	1 Liter	1 Kg	
2	Currency for Purchasing Pretreat	1 USD, EUR, GBP, AUD,CAD	10 CNY	100 JPY	1000 KRW
3	Currency for Cost of Spraying Pretreat	1 Cent, Euro Cent, pence	1 JIAO	1 JPY	10 KRW
4	Set time for the fan off after machine off	10 min	20 min	30 min	40 min
5	Auto Nozzle Cleaning Cycle	1 min	1 hr	2hrs	4hrs
6	Spraying Time during Auto Nozzle Cleaning	1 sec	2 sec	3 sec	

3) EXIT THE SETTING MODE

Simultaneously press and hold  and  button in the COST section on the control panel until **both the numbers** on the control panel (red boxes above) stop blinking.

Trouble Shooting

No.	Problem	Possible Reason	Solution
1	-Streaking on the shirts after coating -Irregular Spraying	- The nozzles are clogged - Filters are clogged	1. Clean the nozzle/filter (refer to maintenance) 2. Replace with new nozzle/ Filter
2	The pump generates no pressure or the spray is too weak	- Electronic valve, nozzle or filter is clogged. - The pump is dirty - The pump is faulty	1. Check the nozzle/filter for pollution and clean 2. Flush the pump with distilled water 3. Replace with new pump
3	Platen doesn't move	- Rails are sticky from pre-coating, dirty or worn out	1. Clean the rails. 2. Replace the rails.
4	The control panel doesn't respond to commands. No function possible	- The cover top is opened - A loose contact on the cable between the display and the electronics - Display failure	1. Please check the sensor located in the hinge of top. 2. Check the cable connection between electronics and the display. 3. Replace display 4. Turn the machine off and turn it on again
5	Power cannot be turned on	- Emergency button is on - Power cable is disconnected - Power switch behind of machine is turned off.	1. Please turn the emergency button off. 2. Please make sure the cables are connected. (Please don't touch with wet hands) 3. Turn on the power switch first.
6	Leaking	- Machine isn't well levelled	Please adjust of machine levelling. Recommended to place front side higher than the back.
7	Humidity inside	- Fan behind of machine stopped - Fan is defective	1. Please switch on the machine and let the fan run 2. Replace the fan
8	Waste liquid not draining	- Drain Connector is blocked - Drain tubes are bent	1. Check the drain connector 2. Drain tubes are to be positioned in lower place.

Warranty Terms and Conditions

Mister-T2 has to be operated with a precoating liquid for fabrics for DTG Printer.
Cleaning **MUST** be done with water only!

Other liquids alcohol or solvent may damage pumps or other components of the machine.
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