

RDTFS800 POWDER SHAKER

Maintenance Extract



Thank you very much for purchasing this product.

- It is important to read through this manual to completely to fully understand all aspects before installation or use.
- Contents of this manual are subject to change without prior notice.
- Some illustrations in this manual might be slightly different from the machine.
- Unauthorized copying or transferal, in whole or in part of this manual is prohibited.
- The specifications of this product and the contents of this operation manual are subject to change without notice.
- The operation manual and the product have been prepared and tested as much as possible.
If you find any misprints or errors, please inform us.
- The distributor assumes no responsibility for any direct or indirect loss or damage that may occur through use of this product, regardless of any failure to perform on the part of this product.
- The distributor assumes no responsibility for any direct or indirect loss or damage that may occur with respect to any article made using this product.
- The distributor shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the manufacturer with your products.
- For best output quality, the distributor recommends that you use genuine consumables and parts from the distributor.

R2-250701m

7. Maintenance.

This extract of the user maintenance section should be referenced in conjunction with the User Manual.

The DTF workflow process is a complicated process involving chemicals, heat and by-products.

It is very important that you understand and implement the recommendations and steps outlined in this section.

It is normal for surface oil and condensation to be produced and will appear on parts of the Shaker unit as part of the process. The amount of cleaning required will vary depending on multiple factors.

1. The amount of use.
 - a. Heavy users of the system will need to perform cleaning checks on daily basis as they will generate more by-products and use filters and consumables faster than in low production environments.
2. Different combinations of ink, media and powders.
 - a. Different combinations of ink, medias (Films, papers etc) and brands of powder will produce different results when being processed by the shaker.
 - b. Different combinations may require different machine settings with regards to temperature, speed etc.
 - c. These different combinations can produce amounts of byproducts and will need different amounts of cleaning and maintenance to be performed.
3. The operating environment.
 - a. As mentioned previously, the operating environment for DTF is very important.
 - b. If the environment is not correct and stable, this can have an effect on the performance and the amount of cleaning and maintenance required to be performed by the user.

The RDTF800 will need to be checked and cleaned on a regular basis – as a minimum we recommend daily inspections of key parts of the product, especially for heavy users of the system.

The appearance of smoke in or around the RDTF800 Shaker.

The heat and chemical process involved through the shaker process can create smoke as a by-product. The RDTF800 has an inbuilt filtration system to process these byproducts and should remove most of the smoke under normal operating and maintenance conditions.

If smoke starts to appear in or around the RDTF800, please perform an immediate maintenance check of the system with focus on the filtration and confirm all filters are clean and operable. Please clean or replace as necessary.

Please contact your dealer or Roland DG if smoke continues to appear after you perform maintenance.

There are some key areas of focus for maintenance.

1. Management of glycol and condensation.
2. Checking and changing of filters.
3. Maintenance of Powder System.
4. Oil draining system.
5. Heating Lamps.

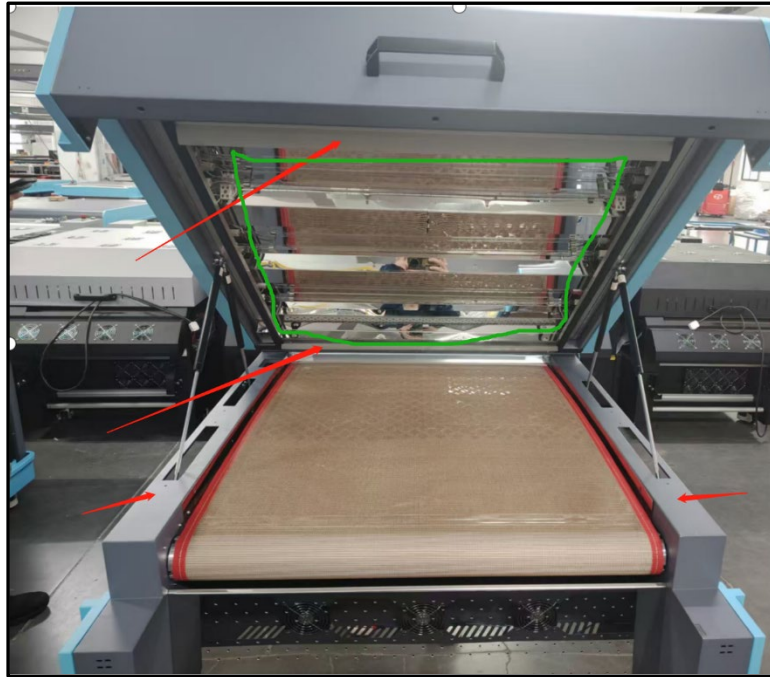
7.1 Management of glycol and condensation.

It is normal for surface oil and condensation to be produced and will appear on parts of the Shaker unit as part of the process in all DTF solutions and applications.

Do not let the oil stains or liquid dry and remain uncleaned on the surface as they will rapidly harden and become very hard to clean. They will appear yellow or rust-like in colour if they have been there uncleaned for a period of time.

We recommend **daily inspections** of the system, especially for medium to heavy DTF producers.

Checking and cleaning the oven



Please check all surface areas of the shaker – paying extra attention to the areas highlighted above.



Care must be always taken as these areas can be extremely hot from operation and can cause burns if the operator is not careful. We strongly recommend using heat proof gloves to help for protection and to let the system cool down before any manual processes.

The best process is to perform this check at the end of each working day.

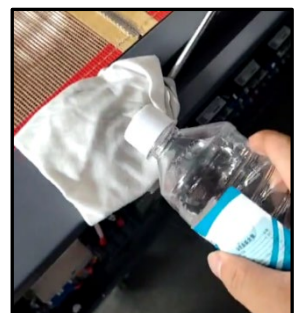
We recommend leaving the heating system on for 15 minutes without processing any media to help to remove excess moisture and oil condensation prior to cleaning.

Once completed, allow the system to cool down before performing manual inspection and cleaning.

A dust free cleaning cloth can be used to wipe any remaining surface liquids or residues from the internal and side surfaces. You can also use an industrial cleaning alcohol if there is excess build up or your cleaning cloth is struggling in some areas.

Please check and clean all stainless-steel surfaces and the grey side chassis areas - including any side channels.

Please regularly check the inside and wash your hands after any cleaning process and dispose of any used cleaning items appropriately.



7.2 Checking and changing of filters.

All filter elements are consumables and will need to be replaced at certain intervals based on use (operational hours). They need to be maintained and replaced to ensure they remove smoke and other by-products of the Shaker process as outlined earlier in the manual.

Failure to maintain or replace will cause smoke to appear and if not corrected can and will damage the product and even release smoke into the air around the machine which is dangerous for operators and people in the vicinity.

There are three internal filters inside the RDTFS800 Shaker System.

1. Metal filter.
2. HEPA Filter.
3. Activated Carbon Filter.

1. Metal Filter

[Part number : 400000045]

The first Metal needs to be manually cleaned and washed to extend its lifespan and maximise performance.

This is the first filter used by the system and needs to be checked on a regular basis. If this filter becomes blocked it will not allow fumes to pass onto the following two filters for filtration and processing. When this happens, smoke can start to appear in or around the Shaker and is a sign that it should be inspected and cleaned immediately.

We recommend checking twice per week for all users. Users performing heavier production of 4+ hours per day are recommended to check the Metal Filter daily and clean when needed.

The metal filter can be washed under a tap as per the image to the right.

Please make sure the filter is completely dry before re-installing and being used again for production. An air-compressor gun can be used to accelerate the drying process. This is an ideal process to perform at the end of the day or use a second filter to alternate.

We recommend that this filter should be changed in line with Activated Carbon and HEPA filters below – up to 300/400 hours of operation.

2. Activated Carbon Filter

[Part number : 300000002]

3. HEPA Filter

[Part number : 300000003]

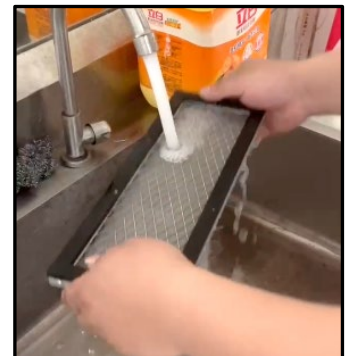
The Carbon Charcoal filter and HEPA filter are the next two filtration stages after the initial Metal filter.

These will last up to 300/400 hours of operation under normal conditions. Changes in consumables or environment can reduce their intended lifespan and heavy users should inspect regularly and will need to change on a more regular basis.

Both filters are a single-use-item and they cannot be cleaned, refreshed or washed. You will see a discoloration on the surface of the filter items and performance of the filtration will degrade.

Please check and replace when these are observed or before the approximate 300/400 hours of operational filtration life.

It is recommended that users hold at least one of each item in stock for replacement when needed.

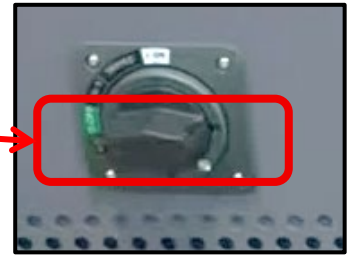


Checking, cleaning and replacing filters.

Please follow the steps below to gain access to the filtration system.

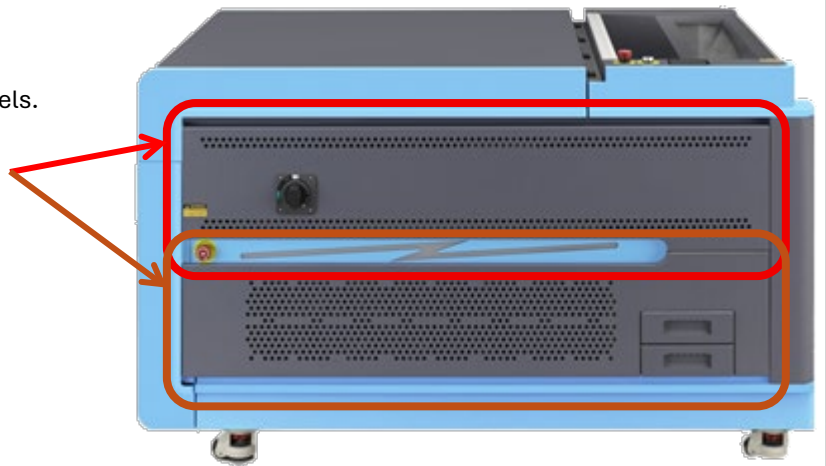
1. Ensure power is turned OFF at main power-switch.

- a. This will cut power to the machine to make it safe to open the side access panels.
- b. You will not be able to open the side access panels if the power switch is NOT in the OFF position.



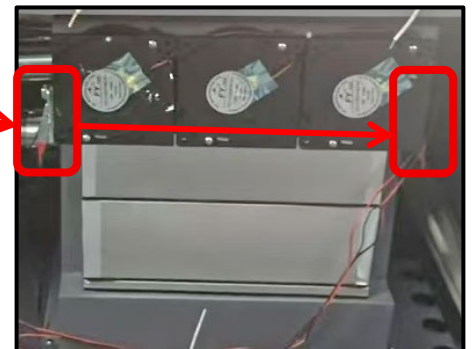
2. Open both of the side panel access panels.

- a. Lift each panel up to remove.



3. Remove top Fan Unit to gain access to the three filters below.

- a. You will need to unclip the two side latches that hold the Fan Unit on top of the filters.
- b. Remove the Fan Unit and place it to the side of the filters.
- c. Take care with the cables connected to the fan unit.



4. Please check and maintain the three filters as necessary, replace when needed.
5. Please check the Fan Unit to ensure that it is clean and free of debris or any build-up of by-product.
 - a. You can use the same dust free cloth and cleaning liquid used to clean the chassis for this process.
6. Please re-assemble the Filter and Fan Unit and ensure you re-latch the Fan Unit back on correctly.
7. Please re-attached the two side covers.
8. You can now power the RDTFS800 back on from the main power switch and check for normal operation.

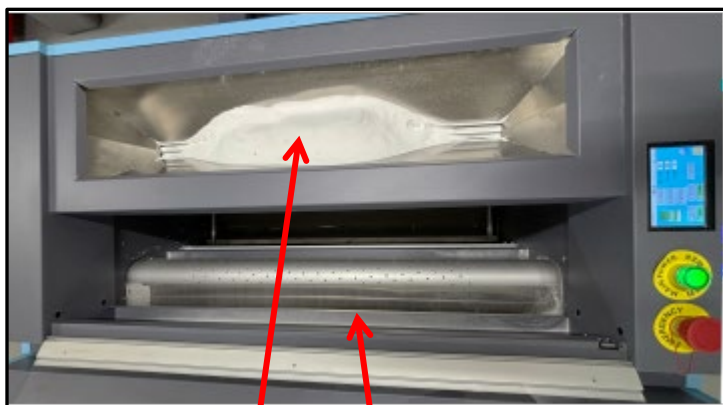
7.3 Maintenance of Powder System.

Check the status of the powder collection drawers daily and recycle the powder for re-use.

Remember that powder is easily affected and contaminated by moisture to please ensure you handle and store it correctly. Users can consider using measures to reduce humidity in storage such as Desiccants or Silica Gel.

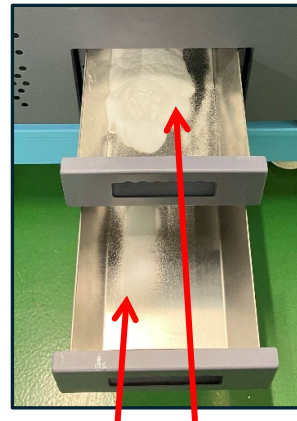
Please clean excess powder and wipe down and remove any excess powder that is outside the normal powder containing or processing areas. Be careful about re-using powder this powder as it may not be clean and if used with contaminants can affect the performance and quality of your final output.

Empty the recycle powder trays and remove all the powder dust for a deep clean every month, more if users are heavy production users to help keep the system in best condition.



Powder Tray

Powder Shaking Bay



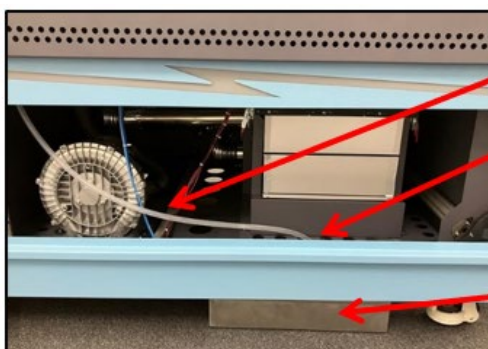
Dual powder collection draws

7.4 Oil draining system.

Over time, by-product oil will drain out of the Shaker system. This will end up in the Oil Waste Tray that sits underneath the Shaker, near the filtration location.

We recommend checking the tray every 2-3 days and check that waste oil is able to drain.

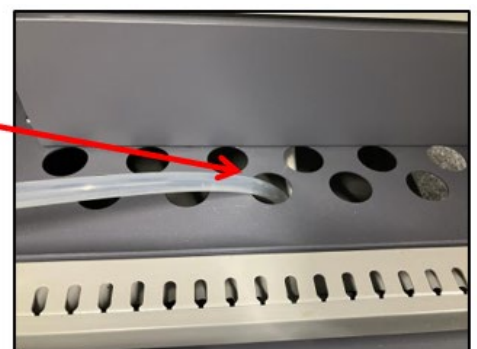
This should be performed as a minimum of every week, again, heavier users should perform more regularly.



Waste oil drain tubes.

Waste oil drain outlet.

Oil collection tray.



7.5 Heating Lamps.

There are two types of heating lamps used in the RDTFS800 Shakers to suit the upper (lid) level and the underside of the feeding belt.

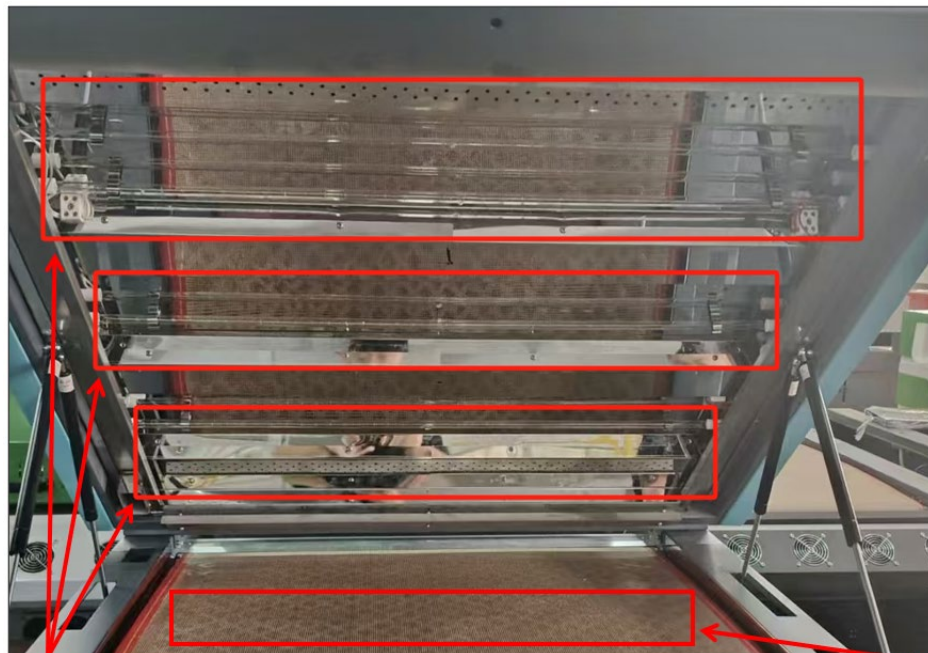
Heating lamps are rated for approximately 12 months use, however this will depend on use so for heavier users they may only last 6-8 months.

Regularly check the condition of the Heating Lamps to ensure best performance so that heating temperatures do not drop down and cause quality of output issues in your production.

As the lamps start to reach end of life, their visual brightness will reduce, and they will become a darker or dull colour.

Lamps will usually get to the end of their life at about the same time and are fragile to handle, so please be careful in the transport, storage and handling of them at all times.

- *Top heating Element* [Part Number: 301060132]
- *Bottom heating Element* [Part Number: 301060140]



Top heating lamps.

Bottom heating lamps underneath.

Managing Media and Powder Consumables.

We recommend using Roland DG Branded and recommended Medias and Powder for stable operation and best repeatable results.

Please store all consumables in a cool and dark environment within the specifications of that product.

Exposure to temperature, humidity and moisture outside of the recommended storage and use specifications can cause consumables to perform at a sub-standard level and can affect everything from machine operation and maintenance to poor production application results.

Allow consumables to acclimatise correctly to the operating environment if they have been stored in a different and out of specification environment. This could take 1 to 5 or more hours depending on the product and environmental change. Doing this will help give you the best results.

Consumables such as Powder are especially sensitive to air and moisture. Please store them in an air-tight container that is free of moisture when they are not in active use for best results. Consider using moisture absorbent pads. Powder should be used within two weeks of opening for best results.

Using old Powder or Powder that has been exposed to excess moisture can cause maintenance issues as well as poor application transfer and durability.

Please dispose of any waste products in a safe manner for the operators and that will confirm to your local safety laws and regulations.