ELECTRODRY GROUP

Cool Room Manual

Acknowledgement

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Introduction

The Electrodry Cool Room Cleaning service is a non-corrosive, low odour and biodegradable system which is designed to increase or maintain a cool room's efficiency, cleanliness and safety.

It enhances servicing from refrigeration mechanics by cleaning the fans and fins that are a vital component between visits by the mechanic.

The process helps the owner of a cool room save money as the cool room will become more efficient, hence using less power. In some cases, an improvement of 25% can be gained on airflow leading to a 10% energy saving.

It also improves the aesthetics of the room by removing unsightly mould and mess from the roof, walls and floor as well as cleaning the refrigeration unit. This will also means fewer disruptions to the owner as cleaning of the cold room will only need to be a yearly event as opposed to a 6 monthly event.

Most of all, due to the removal of the mould present within the cool room, food safety is also increased. The owner will be able to claim that their cool room is compliant with HACCP regulations.

The process involves a cyclic three step process which will be explained in more detail throughout the manual which is Inspect, Correct, and Protect.

Promoting Additional Services

Many customers who have a cold room will probably have carpet or upholstered furnishings which needs to also be cleaned, especially if they are in the hospitality industry or in the case that the cool room exists within a production environment, offices will probably be present.

It is important that you mention to your customers the list of all services that you can professionally deliver. Doing additional work for your existing or new customers while you are already on site can save greatly on all business running costs. These include vehicle, promotional and advertising costs. It is important always to do your best and offer a professional service without making any claims that you can not guarantee to deliver.

A satisfied customer will not only use your service again, but will work as a free advocate for your business by recommending you to friends and associates. However, don't expect a customer to remember who you are, if you don't give them something to remind them of you. There is lots of marketing books out there that can help you in this area. We recommend that you become familiar with various marketing techniques and select those that are appropriate for your business.

Whatever marketing ideas you use will have minimal effect unless they are used consistently and in conjunction with the quality professional service.

Quality professional service means not only providing promptness and efficiency, it also includes giving value for money and excellent results.

While also working on up selling customers who are already using your cool room service you should also be sourcing new customers. Some businesses which may be approached that often have cool rooms are

1. Refrigerated Transport Vehicles
2. Nursing Homes
3. Hospitals
4. Restaurants
5. Rural Properties (particularly isolated ones)
6. Fruit and Vegetable shops
7. Supermarkets
8. Markets (fish and produce)
9. Orchards
10. Abattoirs

Good Business Practice

Professional cool room cleaners are expected to provide the following:

Quality service

This incorporates a reliable, prompt and efficient service. The client should be advised as to all procedures. The attending technician or technicians should be punctual, polite, helpful, and understanding of the client's needs in relation to their goods to be cleaned. They should also be correctly attired (wear clean, correct uniform, etc.).

Quality equipment

This means vehicles and equipment that must be readily available and in good working order at all times. All equipment should be properly labelled with the Company name, telephone numbers and address as well as any appropriate safety advice. All equipment and vehicles should be checked and maintained regularly, without waiting for breakages to occur. Each vehicle should be presentable and properly signed written. It should be clearly defined who is responsible for the maintenance of equipment and vehicles to ensure their availability and readiness.

Qualified staff

This requires that all personnel involved in all of the procedures are properly trained and skilled in their areas of involvement. This could include the receptionist (telephonist), office staff, on-site technicians and factory/warehouse staff (at times some furniture cannot be cleaned on site). This could mean attending appropriate Training courses relevant to the job specification of each member of staff involved.

Communication skills are of the utmost importance for all personnel involved in the Service industry.

Documentation

Provision of professional documentation, which means the availability of all appropriate forms, starting with the initial telephone call checklist, pre-inspection forms, through to a final account.

Chemicals, etc.

Provision of chemicals and appropriate ancillary supplies must be constantly maintained and re-stocked. All chemicals should be clearly labelled and stored in appropriately ventilated areas. For all chemicals that are used and carried either at the factory/warehouse, in each vehicle or on site material safety data sheets (MSDS) must be available.

Health and Safety

Ensuring safety is a prime responsibility of any professional. These incorporate provision of a healthy and safe environment for the technician as well as customers.

Chemical Safety

General Chemical Safety

1. Store chemicals securely in correctly labelled appropriate containers.

2. Containers used on site should be correctly labelled

3. All safety data sheets (SDS) must be available wherever chemicals are being used or carried (vehicle, on site, factory)

4. Carry and use protective equipment such as chemical resistant gloves, respirators with appropriate filter cartridges and eye protection.

5. Dispose of waste and unused chemical properly in accordance with local regulations as per Australian and New Zealand standards

6. When mixing chemicals for cleaning upholstery always read the label of the container and mix chemicals according to the manufacturer's directions

7. Always read labels and observe safety considerations

8. Never mix chlorine bleach with ammonia as it creates ammonium gas, which is poisonous

9. Do not sniff chemicals or containers to find out what it is. If in doubt, throw it out

10. Wash your hands well after handling any chemicals or containers with chemicals

11. Avoid skin contacts with chemicals. Acids and alkalies can burn the skin

12. Continuous exposure to even the mildest of chemicals can lead to problems. Nearly all chemicals can have a threshold limit value (TLV). This rates the parts per million at which exposure may become a problem

13. Always cap your chemicals immediately following their use

14. Never leave any chemicals unattended

15. Ensure that children or pets do not have access to the area while chemicals are being used

Equipment Safety

Electrical Safety

1. Have all electrical equipment regularly checked and serviced. Inspect power cords for wear, fraying or other damage

2. All electrical equipment that is not marked as being double insulated, should be properly earthed (grounded)

3. Use an earth leakage protection device and check all power points are earthed

4. Never disconnect safety features on equipment

5. Do not allow electrical cords or plugs to become wet

6. If you blow a fuse in a fuse box, replace it with the correct size fuse wire (15 Amps for power points are standard throughout Australia)

7. Disconnect power cords from sockets before doing any maintenance on your Equipment

8. Disconnect electricity before filling equipment with water

Site and Personal Safety

1. Arrange equipment so that it is out of traffic ways

2. Arrange hoses and power cords so that people cannot trip

3. Always ask people to keep children away from the work area at all times

4. When not using hoses, turn off pressure hoses to prevent accidental spraying of fluids and keep a tool connected to the vacuum hose to prevent accidental injury

5. Use drop sheet to help prevent slippery floors

6. Post caution signs to warn customers that floors may be slippery and give verbal warnings as well

7. Ask customers if any occupants suffer allergic reactions, and take appropriate actions or precautions. Certain chemicals (usually perfumed deodorants used in some chemicals, solvents, alkaline or acid solutions or enzymes) or even just raised humidity levels can trigger attacks in hypersensitive people. Sometimes the fine dust kicked up by pre-vacuuming or moving fabrics about can fill the air with Dust-mite soiling (a very well-known allergen)

8. Use correct lifting techniques to avoid back injury

Equipment

The professional cool room cleaner should have a good set of tools readily available which will enable them to easily contend with the challenges of cleaning such a different environment. The following is a basic list which should be thought of as the minimum requirement.

1. Cordless power drill, for the removal of fan covers and other parts which will allow you to clean the units to a proper standard. This is also for the following two items.

2. Screw driver set

3. Socket Set

4. Wire Brush, for the removal of mould or extra cleaning of the fins if there are excessive amounts.

5. Wire for the cleaning of drainpipes if heavily blocked.

6. A tape measure to allow you to properly identify the size of rooms.

7. Micro Fibre Cleaning Cloth for applying solution to the walls of a cool room.

8. A torch for pre-inspection of the fans and fins. This will allow you to view these items in better detail and to give you a better idea for how much product to use.

9. A step ladder to help view areas which might not be accessible such as air conditioners in high places, cool room air-conditioners or pipes in hard to reach areas.

10. Broom, for the cleaning of a cool room floor, as

11. Dustpan and brush for removal of solid wastes.

12. Pump up sprayer for the application of chemicals.

13. Sabrina or Maxi

It is suggested that a high pressure cleaner with capture and recovery would be best equipment for the cleaning of cool rooms. This would speed up the cleaning process and allow the floors to be left in a safe, semi-dry state.

HACCP Regulations

The Cool Room cleaning service offers customers the ability to comply with HACCP regulations in regards to the safe food handling and storage techniques for cool rooms.

Once a job has been completed, a maintenance sticker is attached to the cool room stating that it has been cleaned to these standards. In order for this to occur, an understanding of these regulations is needed to ensure that the work has been done and exceeds compliance.

Cleaning Chemicals

The Cool Room clean utilises two chemicals. Each of these products is bio-degradable, low odour and non-corrosive.

Eco-Cleaner

This product is a colloid with a twist. The unique cool room formulation for this product ensures that you get the optimum clean with no irritants. Its non-corrosive, biodegradable qualities make it ideal in situations where food will be stored. Its colloid action means that it gives an excellent clean in a short space of time.

Eco-Protect

This product has been developed for cool rooms only. It is a coating that is non-corrosive, antistatic and hydrophilic. When applied, it is less than 1 micron thick and has self-levelling properties to give an even coating. Self-levelling ensures that the product does not obstruct airflow in relation to the fins.

The antistatic is so that the static created by the motor does not attach the spores. Static exists in the moisture that is created by the motors heat.

The hydrophilic element is so that the water sheets off the walls and motor rims. It restores all of the surfaces back to the condition in which they were originally designed to operate. It brings them back to the standard.

The Cool Room

Cool rooms are designed to a standard for the prevention of food poisoning. Food poisoning is bacteria that multiply rapidly in the right temperatures.

Cool room design is to maximise airflow at the right temperature. The correct temperature of a cool room is approximately 5-6°C, this is to prevent food items from freezing but to keep them below a temperature where harmful bacteria can thrive.

The ceiling and walls of a typical cool room are usually powder-coated aluminium. This is to create a hydrophilic surface so that any water or moisture can run freely to the floor. Some cool rooms are painted with a specially designed paint to give the same effect.

The floors are usually concrete which tend to absorb the moisture and moisture from the air. The amount of moisture is usually not enough to cause water pools on the floor.

The cooling system is normally mounted close to the ceiling. The reason for this is that hot air rises so the first change in temperature is closest to the ceiling. When the thermostat detects changes in the temperature, the fans come on to keep the temperature at a constant 5-6°C

The Refrigerator

Because the refrigerator motors are warm, moisture is created. A drip tray is placed underneath to catch the moisture and a drain will usually run from the drip tray to an outside drain.

The moisture created forms the perfect environment for mould to grow. Mould is not affected by temperature, as the spores only require moisture to grow, unlike bacteria where temperature slows its growth so that it is food safe.

Mould

When mould starts to grow is the time when problems can occur. The spores can enter the cool room a number of ways. These include from food, animal products or from fruit.

Once the spores find their way into the cool room, they can become airborne through the circulation of the air within the room. Add moisture from the condensation and the conditions are perfect for mould growth. The spores can then collect and proliferate in the fans and filters, clogging them and making the motors work harder and harder with the build-up.

The fans and motor are controlled by the thermostat and will keep going till the 5-6°C temperature is reached before it switches off.

If the airflow is poor, the cooler air will fall toward the floor, keeping the warmer air near the ceiling. It can also cause icing with inconsistent airflow and temperature fluctuations.

Body Fats

Another problem that can cause labouring of the cooling system is body fats. Body fats and fats from food tend to build up in the drip tray. They are caught within the moisture in the air, circulated by the fans and eventually collect in the pan.

These fats block the drip line, which then fills the drip tray with water. It can overflow into the fan, causing the water then to be sprayed throughout the cool room. This water can be contaminated.

Door Seals

Another obvious cause of temperature loss is the door seal. If the air is escaping, the same thing will happen. The motor has to work harder to maintain the 5-6°C temperature.

Walls and Ceilings

The walls and ceiling are designed so that the water or moisture will run off to the floor. This surface is called hydrophilic, literally meaning the water sheets down the walls.

In a perfect world this would work well if the walls were cleaned regularly. Many things can cause problems. Cool rooms have racks for storage and as things are placed on these racks, splashes or even the wax from cardboard boxes, leave a reside on the walls inhibiting the flow of moisture down those walls.

These in turn cause what is called “fish eye” as the water runs around the marked wall and will enable mould to grow.

Floors

As stated earlier, the floor is usually a concrete slab. Some are sealed, but very little more is ever done to this surface.

We also know that the water running down the walls and off the ceiling ends up on the floor, making this the dirtiest surface in the cool room. Other issues affecting this surface are splashing and dropping of food on it, as well as contaminants bought in on the soles of shoes.

This also causes the growth of mould with spores being spread through the airflow system and contaminating other surfaces within the room.

Inspect

1. When entering a cool room you need to first look at the refrigeration and fan unit. Sometimes there can be more than one of these depending on the size of the area to be kept cool.

2. Inspect the fins attached to these units (they resemble a car radiator). If they have not been cleaned in a while, they will appear black from the growth of mould.

3. Inspect the fans, these could also appear black from the growth of mould if cleaning has not been done for some time.

4. Examine the screws that hold the grill on. This may need to be removed for cleaning. Your cordless drill with both flat and Phillips head attachments is a handy tool for inspection jobs.

5. Now inspect the walls and ceiling. Make a note if there are any holes. Look at the state of the walls and if there are any cardboard boxes stored. Most of these boxes are wax coated. The wax rubs off onto the walls and creates a hydrophobic spot. You will need to use a delaminate to remove these spots. If there are holes in the walls you will need to plug these and paint with cool room paint.

6. Now look at the floor. The method used to clean the floor is a portable high pressure cleaner with recovery. If the head of the recovery machine is too large you will need to use a brush and vacuum.

7. Lastly, we check the seal on the door. Note the condition of the seal. You will need to determine if there are any cracks or if it needs replacement. If replacement is required, it is added customer service to organise this on behalf of your client.

Once the inspection has been completed, you will be able to give an accurate quote and report on the condition of the cold room. Ask at this point if they will be emptying the cool room. If they will not, you will need to factor this into your quote as well.

Now you can determine a time that suits both of you. The best time for this is prior to deliveries as the cool room will be at its emptiest.

Example Inspection Report

Inpection Report

Organisation Name: _____ Date: _____
Coolroom Location: _____
Contact Person: _____
Mobile: _____ Email: _____
Address: _____

No. Air Units	No. Fans/Fins	Average	Poor

Comments: _____

Walls	Good	Average	Poor

Comments: _____
Repairs: _____

Ceiling	Good	Average	Poor

Comments: _____
Repairs: _____

Floor	Good	Average	Poor

Comments: _____
Repairs: _____

Door Seals	Good	Average	Poor

If door seals need replacement, would customer like us to organise this or will they organise this themseleves? ***US*** ***THEM***

Total Area

Height	Length	Width

Painting

Walls	Required	Not Required
Ceiling	Required	Not Required

Access Details

Will the room be empty? **YES** **NO**

Equipment access and suitable times _____

Additional Comments

Esimators Name: _____

Preferred method of quotation

Phone	Email	Post

Correct

1. The most important step in the whole process is turning the power off. You should also tag the switch so that it cannot be switched back on inadvertently.

2. Heat the water in the pressure tank. If it doesn't have a heater, use a heating coil. Add the cool room wash product Eco-Cleaner following the directions in relation to dilution to suit your equipment. The pressure should be between 100 and 150 psi.

3. Once pressure has been achieved, and product is hot, start by spraying at the back of the motor which is where the fins are located. Spray liberally.

4. Spray the fans, most of the product will go to the drip tray and start working to clean the pan and drip line. If the pan is not emptying, this will mean the drain line is blocked.

5. If the drain line is blocked you will have to take the pan off and use a piece of wire and push into drainpipe. Spray hot Eco-Cleaner into drain until clear.

6. The fins may still look black. If this is the case, you will need to use your wire brush, scrub the fins and then rinse with Eco-Cleaner. If fans are still black with mould, remove the grill and wipe with a micro fibre cloth. Don't worry about product on the floor as it is beginning the cleaning process.

7. Delaminate, known as Orange Glow, is used to get the wax and marks off the walls. This should be done after you have cleaned with. Eco-Cleaner

8. Spray the ceiling, walls and door. Then, using a micro fibre cloth, wipe all surfaces. This can be done quicker and easier with a broom covered in a micro fibre cloth

9. Eco-Cleaner should now be all over the floor, if not spray over the entire floor. Eco-Cleaner does not require a long dwell time so we are now ready to reset the portable high pressure sprayer for the recovery and remove all of the product and waste.

10. Clean the door seal and the outside of the door.

11. The final touches are placing a maintenance sticker on the door noting the date of clean and the date the next service is due.

In addition to the above, placing a hand sanitizer dispenser next to the door can also add a professional touch Whilst the hand sanitizer is only an option, you have created a clean environment and as such you want it to stay that way for as long as possible and to prevent the recontamination of surfaces. The hand sanitizer gives you a professional edge that is a valuable asset from a customer service point of view.

Protect

1. The protection product Eco-Protect is designed to give added protection between cleans. It contains an antistatic and coats the surface further inhibiting the ability for mould to grow. This enables you to guarantee a job for a 12 month period. Without the coating, a 6 month period of guarantee is recommended.

2. Spray the Eco-Protect into the refrigeration unit making sure that the fans are coated. If the grill is removed to clean the fans, this would be the best time to apply the protective coating.

3. Spray the Eco-Protect on the walls and ceiling and wipe. This will restore the hydrophilic condition to what is required.

You have now inspected, corrected and protected a cool room. You have used the best products and restored an environment to its optimal condition.