



RWD510 Series Scavenging Unit Operation Manual

Version No.: Rev 1.2

First of all, sincerely thanks for selecting the RWD510 Series Scavenging Unit made by RWD company.

Please read this instruction manual and all other auxiliary materials carefully before installing and using the product, which will be helpful to work with it better.

RWD has been always dedicated to improving the product function and the service quality, and will reserve the rights to revise the products itself and contents described in the instruction manual at any time without notice in advance.

If you find the practical situations about the supplied goods do not agree with the contents described in the manual, or if you want to get the newest information and have any questions and idea about our products and service, please visit our web site as follows or contact us immediately.

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Product Overview

The Scavenging Unit is well established as an extremely efficient anesthetic scavenging system in leading institutions where a safe working environment is essential. It is able to deal with any organic anesthetic agent such as Halothane, Isoflurane, Sevoflurane and so on.

The Scavenging Unit provides an extremely easy and practical method of anesthetizing small mammals, reptiles and birds.

In practice, the anesthetic vapour is administered to the patient via the Scavenging Unit Mask Inner tube and excess Vapouriser scavenged via the outer tube of the mask. This excess is then drawn through a filter which is a canister containing activated charcoal which absorbs the anesthetic agent very efficiently onto the surface of specially treated charcoal granules.

The animals are thus anesthetizing using the mask supplied with the Scavenging Unit or various chambers.

Safety Warnings

1. Before use, please carefully read the following items and refers to safety regulations and required measures that protect the operator or other persons from injury or danger to life.
2. When using the unit, you should know what must be done or avoided so that the unit or other property is not damaged.
3. Never remove the cover of the unit without first switching the power OFF and unplugging the power cord.
4. Damage to the power cord or the housing can result in contact with live parts. Check the power cord and housing before each use. If the power cord or unit is damaged, do not operate.
5. Do not use the Scavenging Unit with flammable or explosive gases.

Note: Electrical maintenance must be done by a qualified electrician only and the unit may be repaired only by a RWD Life Science Co., Ltd authorized service technician.

Specifications & Configurations

1. Technical Specifications

Energy Requirement:

Input Voltage Ranges: 220-240VAC

Input Power: 0.35A

Input Frequency Ranges: 50-60Hz

Fuse: 1A 5x20mm

Environment Conditions:

Installation Category: II

Dimensions:

Scavenging Unit Sizes: Approximately 420mm(W)×180mm(D)×160mm(H)

Weight: 9.5kg

2. System configurations

Including scavenging unit (Gas Evacuation Apparatus and Filter Canister) and Mask.

Masks available for the Scavenging Unit are as follows:

R510-32 Single Mask for Mice (pore size: I. D. 9mm)

R510-33 Single Mask for Rat (pore size: I. D. 18mm)

R510-34 Single Mask for Dog (pore size: I. D. 54mm)

R510-35 Double mask for Mice (pore size: I. D. 9mm)

R510-36 Double mask for Rat (pore size: I. D. 18mm)

R510-37 Double mask for Dog (pore size: I. D. 54mm)

R510-38 single mask for Muridae/Cat (pore size: I. D. 24mm)

R510-39 single mask for Cat/Rabbit (pore size: I. D. 31mm)

R510-40 single mask for Cat/Dog (pore size: I. D. 40mm)

R510-41 Double mask for Muridae/Cat (pore size: I. D. 24mm)

R510-42 Double mask for Cat/Rabbit (pore size: I. D. 31mm)

R510-43 Double mask for Cat/Dog (pore size: I. D. 40mm)

In addition, Gas Evacuation Apparatus (R510-30) or Filter Canister (R510-31) could be purchased separately.

Note: Upon delivery, carefully unpacking your Scavenging Unit and ensure that it has arrived in good condition. Any obvious transit damage must be reported promptly to RWD company within 24 hours of receipt.

Installation

1. Firstly make sure the power is OFF and the unit is unplugged before proceeding.
2. The unit is supplied with a moulded power cord. The female plug should be connected to the male socket on the rear of the unit, while the plug located at the opposite end of cord should be used for connection to the electrical utility outlet. This outlet must have a protective earth connection.

Ensure that the connection does not cause a trip hazard and position the system to allow easy access to the mains connection.

3. The masks are easily set up and interchanged as they simply press fit onto the top of the Filter Canister.

Note: The filters are consumables which are replaced when their absorption capacity is exhausted. This is either determined by manually weighing the filter (Adsorber).

Operation

Setting up the equipment:

(Please see the below Diagrams 1 & 2)

1. The anesthetic Vapouriser is connected to the gas supply, the flow of which is regulated by a pressure gauge or flowmeter set according to requirement.
2. The Vapouriser Outlet is connected to the Scavenging Unit. If using the Double Rodent Mask the supply is split into two by means of a “Y” connector.
3. The Mask T piece is a push fit onto the top of the Adsorber which in turn stands on the mounting situated on the Scavenging Unit.(The system is now ready for use)

Adsorbers:

A new filter canister weighs about 950g and the exhausted weight is 1150g. When exhausted they are discarded and can be incinerated. It is recommend to check the weight prior to use on a regular basis. Replace with a new canister when exhausted.

Using the Equipment:

1. Switch on the Scavenging Unit using the switch located on the rear panel (marked O/I). An alarm will sound briefly indicating that the air flow sensor is functional (if no such sound is heard, do not use the equipment and consult the manufacturer). Turn the gas supply on (Oxygen supply and / or Nitrous Oxide).
2. Adjust the pressure gauge supplied with the Oxygen supply or the Flowmeter to give a flow upon request.
3. Two animals could be anesthetized simultaneously if required using the Double Rodent Mask, but if using only one arm, you could clamp off the supply which is not in use.
4. Hold the muzzle of the animal in the mask and turn the Vapouriser to approximately 2.5%-5% to induce anesthesia. Once induced, anesthesia is maintained at approximately 1.0%-2.5% and flow is also reduced to approximately 500ml/min.

This varies with species, size, body fat percentage, age and strain of animal.

5. To use the Adsorber economically, we would recommend using the lowest flow and the lowest concentration of anesthetic vapour to give acceptable levels of anaesthesia.

Note: In the event of the low air flow audible alarm sounding during use terminates the use of equipment at the soonest possible convenience. Do not restart the equipment and consult the manufacture.

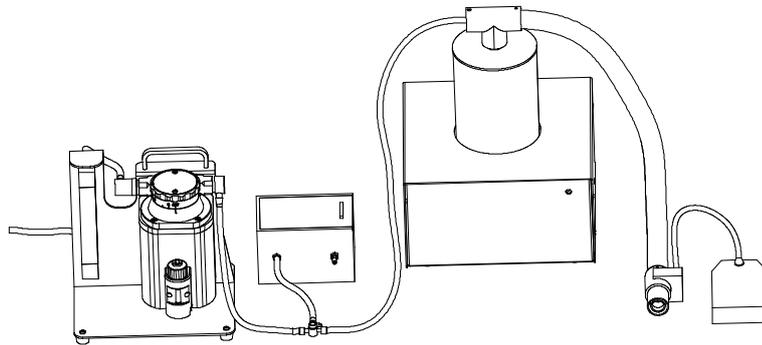


Figure 1 Connection Diagram of Scavenging Unit for Single Mask

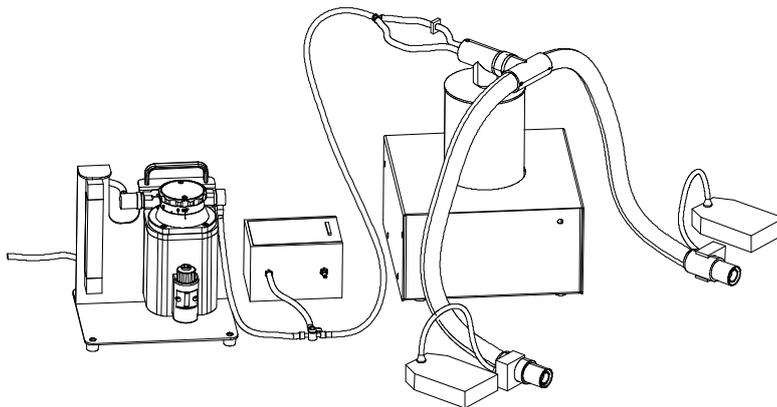


Figure 1 Connection Diagram of Scavenging Unit for Double Masks

Maintenance & Care

The Scavenging Unit requires little maintenance during use apart from regular cleaning.

Pay particular attention to the gap between the inner and outer tubes of the mask, as hair can accumulate and impair the scavenging efficiency of the unit.

Note: please quote the Serial Number should any quires arise concerning this unit.

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