S10 and S20

Thermal Life-support Cabinets

User Instructions

Medical intensive care unit for mammals, reptiles and birds.

Contents

IMPORTANT NOTICE

The Manufacturer of Vetario products and its agents or distributors will not be responsible for loss of animals in the event of failure however caused and the user is advised to arrange his own insurance cover where loss of power or mechanical or electrical failure might result in unacceptable losses. It is not recommended that animals of significant value be housed in this product unless it is used in conjunction with an independent temperature alarm system. Such systems are available from the Vetario range of products.

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1. Introduction

Congratulations on the purchase of your new Vetario Intensive Care Unit. The S10 and S20 provide the ideal veterinary intensive care environment for peri-operative patients sensitive to hypothermia, shock and other post-operative complications. These products give patients the best possible chance of a successful recovery.

These instructions detail the operation of your new Vetario intensive care unit. Please read them carefully before setting up your unit to achieve best results and keep these instructions safe for future reference. Your Intensive Care Unit is designed to allow the user to vary the environmental conditions to suit recovery of a wide range of species and the specific set-up for every recovery scenario is beyond the scope of these instructions. There are a range of books and veterinarian texts available covering animal recovery techniques.

The principle applications for the S10 and S20 are as an advanced Intensive Care unit for sick, injured or post operative animals and birds.

Care must be taken to ensure patients do not cause damage to the interior, particularly interference with the filter or components above the filter. **Damage to these parts could cause injury or death to an animal.**

The S10 and S20 include a Nebuliser head and oxygen supply socket, allowing drugs and oxygen to be introduced to the chamber.

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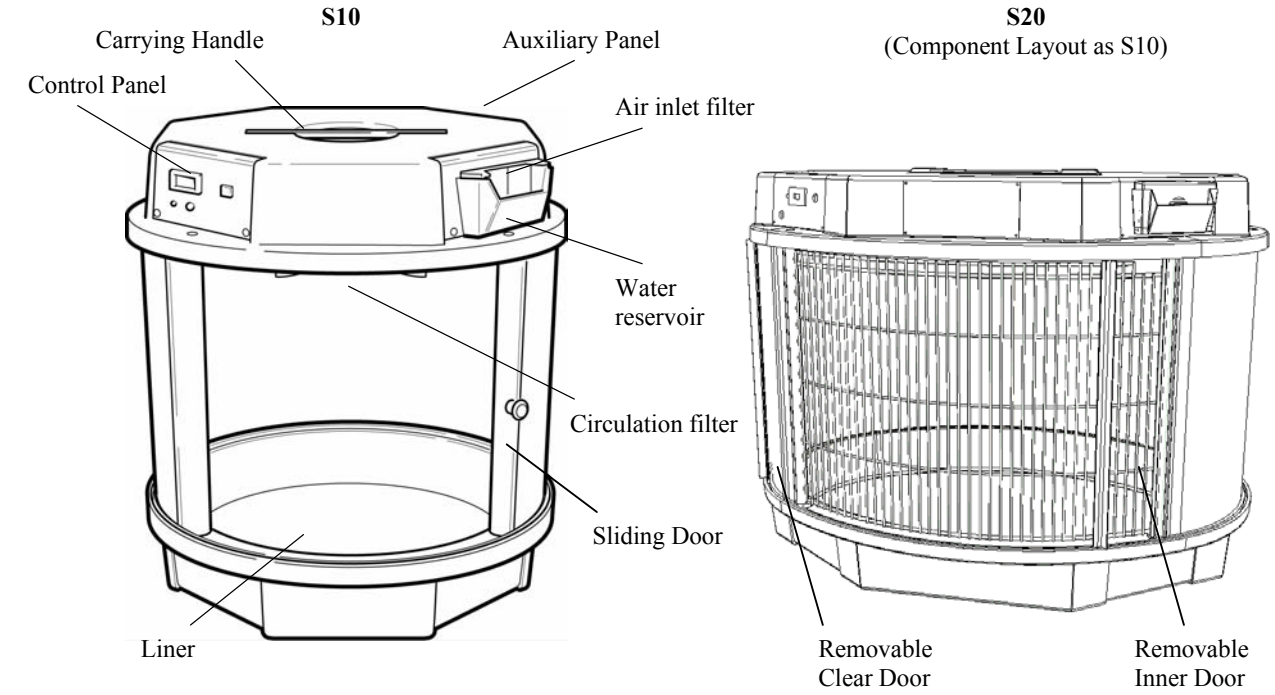
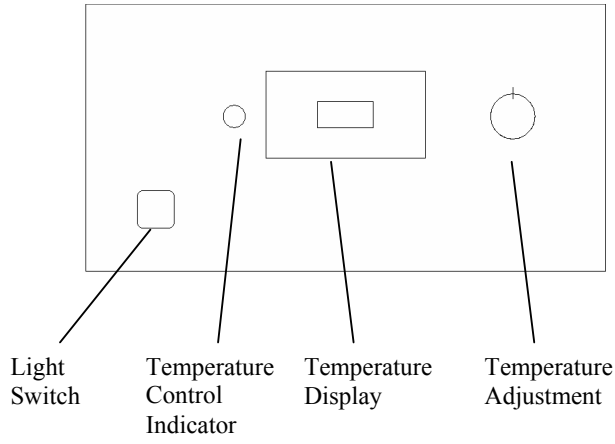
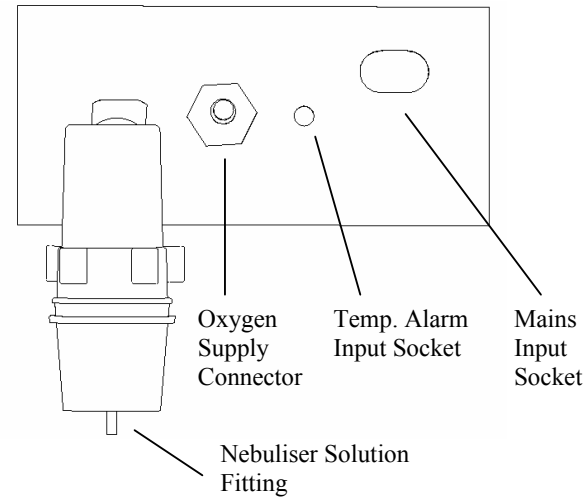
Fig. 1 *Functional features of the S10 and S20.*



Control Panel: -



Auxiliary Panel: -



Feature Listing:-

	Control Panel	Carrying Handle	Auxiliary Panel	Circulation Filter	Air Inlet Filter	Liner	Removable Inner Door	Outer Door	Water Reservour
S10	✓	✓	✓	✓	✓	✓		✓	✓
S20	✓	✓	✓	✓✓	✓	✓	✓	✓	✓

2.0 Unpacking

Your S10 / S20 Intensive Care Unit has been supplied in protective packaging. Please remove all tape, strapping and packing. Retain the carton and packing materials to enable the unit to be repacked.

Unpack to find the following:-:

Quantity	Item
1	S10 / S20 Intensive Care Unit (with filters fitted)
1	Plastic Liner for Base
1	Nebuliser head
1	Clip and screw for nebuliser head (S10 only)
1	Mains Lead
1	Guarantee Card

2.2 Check that the electrical supply matches the machine's requirements (marked on the technical label on the rear of the product). UK machines are fitted with a 3 Amp fuse in the mains plug – if replaced always use this rating.

3.0 Location and Installation

Your S10 / S20 will give best results in a room free from wide temperature variations and with generous ventilation – particularly important if several units are in use at the same time. Ensure that the room temperature cannot drop on a cold night. Ideally thermostatically control the room at between 20 and 27°C (68 and 80°F). Never allow the room temperature to drop below 15°C (59°F) and ensure that the product cannot be exposed to direct sunlight.

Note that exposure to direct sunlight may cause fading of plastic colours. This does not adversely affect the performance of the material in any way.

3.1 Place the S10 / S20 on a flat, level surface (workbench height is ideal) with the door facing forwards. A second S10 / S20 can be stacked on top. Ensure that the feet of the upper unit locate in the recesses on the top of the lower unit and that the door is facing forwards on both machines.

3.2 Your S10 / S20 is supplied with filter media fitted (see fig.1). For details of filter replacement see servicing section.

3.4 Plug the mains lead into the 'Figure 8' socket on he rear auxiliary panel of the machine. Connecting the power will start the fan(s) (which run continuously), illuminate the red LED on the control panel and the digital temperature display will indicate the air temperature within the intensive care chamber. See section 4 below on temperature adjustment. Ensure the sliding door is closed before adjusting temperature.

3.5 The interior of the S10 / S20 can be illuminated to make cleaning or inspection of patients easier by pressing the red button on the control panel.

4.0 Temperature

Stable and correct temperature is essential for a good recovery. Adjust with care and read the following points and procedures carefully before setting up the intensive care unit.

WARNING:-

THE CIRCULATING FAN AND THE METABOLIC HEAT FROM PATIENT CONTRIBUTE HEAT TO THE INTENSIVE CARE UNIT. THE INTENSIVE CARE UNIT MAY NOT CONTROL PROPERLY IF THE ROOM TEMPERATURE IS LESS THAN 3ºC (10°F) LOWER THAN THE TEMPERATURE REQUIRED INSIDE THE PRODUCT. (FOR THE S20 PRODUCT ADDITIONAL VENTILATION CAN BE ACHIEVED BY SLIDING OPEN THE OUTER DOOR).

4.1 The internal light contributes heat to the S10 / S20 when switched on. If room temperature is high and close to the set temperature the light can cause overheating when left on**. It is recommended that the light is not left on for periods longer than 5 minutes.**

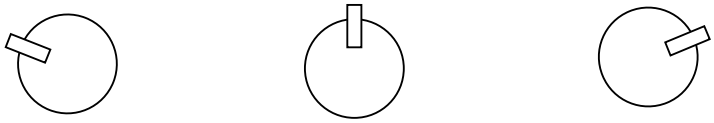
4.3 The S10 / S20 has a thermal cut-out feature as standard. In the unlikely event of the unit overheating the heater will cut-out at approx 45ºC immediately, and will not come back on until the unit has cooled to approximately 35ºC.

4.4 Your S10 / S20 is fitted with a high quality, individually calibrated digital thermometer. Be cautious of the accuracy of other thermometers used and have them calibrated if necessary.

4.5 After connecting power the S10 / S20 warms up and after a period of time the red LED will change from continuously on to flashing. When flashing regularly the S10 / S20 is controlling at the set temperature. Allow at least half an hour for the temperature to fully stabilise throughout the unit before making adjustments to achieve the desired temperature.

4.6 To adjust temperatures rotate the knob on the right hand side of the control panel, clockwise to increase temperature, anticlockwise to reduce it. Follow the approximate guide below to achieve desired temperature settings. Always allow half an hour between adjustments for the temperature to stabilise and refer to the digital temperature display to confirm that the desired temperature has been reached.

Temperature Setting Guide (Approx.)



20ºC (64ºF) **30ºC (80ºF)** **40ºC (96ºF)**

4.7 When reducing temperature the red LED may go out while the S10 / S20 cools – this is normal.

4.8 For most applications involving intensive care the unit should be set to between 30 and 35ºC (86 and 95ºF). Note that the temperature should be gradually reduced to room temperature (20 – 25ºC or 68 – 77ºF) as the patient recovers to avoid sudden temperature change when the patient is removed.

4.9 Care should be taken about cooling that occurs during feeding or inspection of very small patients. Keep the room warm, hold the patient in a cloth to prevent chilling from cold hands and use warmed feeding utensils.

5.0 Humidity

Elevated air temperatures in the S10 / S20 will reduce the relative humidity level (RH) and can cause dehydration. A water reservoir is fitted to counteract this effect.

5.1 Your S10 / S20 intensive care unit is fitted with a water reservoir (see fig.1) which humidifies air as it is drawn into the brooder through the air inlet filter. Use a solution of a proprietary water-based disinfectant (1 part concentrate to 100 parts water) in the water reservoir to inhibit bacterial build-up. It is recommended that the reservoir is topped up with solution daily to reduce dehydration. This can be a particular problem with chick(s).

5.2 To further increase humidity levels within the intensive care unit the water reservoir is fitted with a block of absorbent paper mesh as standard. This block may be cut down in length with a sharp knife or removed entirely to give lower humidity levels. The block can provide a breeding ground for bacteria. In addition to the use of water-based disinfectant concentrate in the water, it is recommended that the block is replaced every 2 months of use.

6.0 Introducing your Patients

Once the correct temperature has been established and the air humidified the S10 / S20 is ready for use. Place the patient(s) directly onto the liner provided.

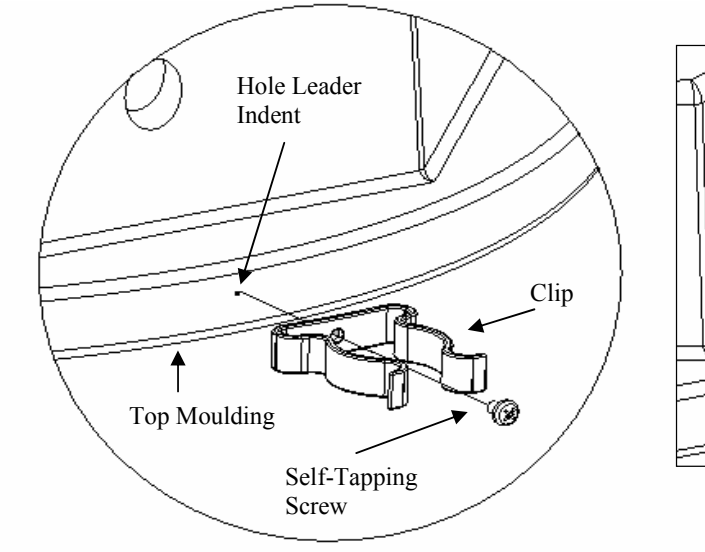
6.1 Young patients of similar age and size can be placed together and benefit from the warmth and comfort. If disparity in size is too great a smaller patient is at risk of being crushed or smothered.

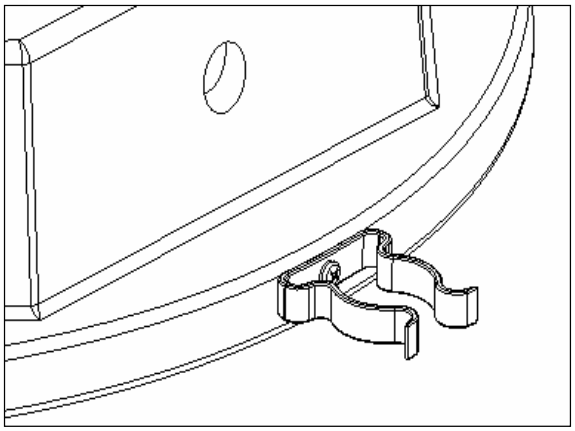
6.3 Follow feeding regimes recommended for your patient ensuring the highest standards of hygiene at all times.

6.4 In order to maintain maximum air-flow through the recovery chamber the filters should be checked once a week for dust or down, and cleaned if necessary.

7.0 Auxiliary Components

7.1 *FITTING NEBULISER HEAD (S10 Only):-* Screw the black clip onto the side of the S10 as shown below. DO NOT OVER TIGHTEN THE FIXING SCREW.





7.2 The translucent Nebuliser solution holder (supplied) can be connected to your Nebuliser pump and fitted into the clip such that the mouthpiece enters the S10 / S20 through the hole on the rear of the auxiliary plate just above the clip.

7.3 Note that the S10 / S20 draws air into the main chamber through the ceiling and so the mist created by the Nebuliser will be drawn into the main chamber too.

7.4 Nebuliser pumps to match the solution holder supplied with the S10 / S20 are available from your Vetario distributor).

7.5 *OXYGEN SUPPLY INPUT* – Use the Oxygen Supply Connector on the Auxiliary panel of the S10 / S20 to attach oxygen supply tubes. As a guide, Oxygen flow rate should be set to 2 litres per minute to raise the concentration to approximately 30-35%. If higher concentrations are required it is recommended to feed the oxygen directly to a suitable mouthpiece in accordance with usual veterinary practice. Be sure to closely monitor the temperature while operating the S20 with the outer door fully closed, an animal's body heat may significantly raise the temperature in the unit (see section 4). Never introduce flammable gases / solutions (e.g. some anaesthetics) as this may create a risk of fire/explosion.

7.6 *TEMPERATURE ALARM SOCKET* - The S10 / S20 products are fitted with a 3.5mm Temperature Alarm Input Socket as standard. This is allows a Vetario T20 Temperature Alarm Module to be fitted to the product. Contact your distributor for more details on this product.

8.0 Cleaning Up

8.1 **IMPORTANT:**

DISCONNECT THE S10 / S20 INTENSIVE CARE UNIT FROM THE MAINS POWER SUPPLY DURING CLEANING.

ENSURE THAT ALL ELECTRICAL PARTS ARE KEPT DRY.

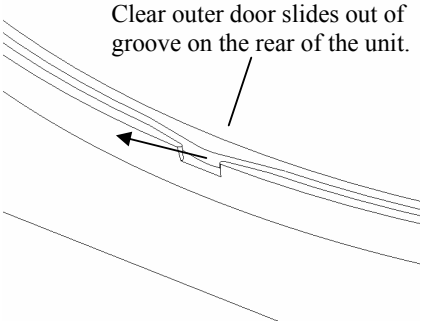
ALWAYS USE WATER BASED DISINFECTANTS WHEN CLEANING.

8.2 Following each patient recovery in your S10 / S20 intensive care unit remove all debris from the floor. Wipe all internal surfaces with a soft cloth soaked in 100:1 water-based disinfectant solution. Filters should be inspected on a weekly basis and be cleaned if necessary. To clean filters remove and gently hand wash them in warm water then allow to dry before use. Filters need replacing every six months. Immerse and soak the liner in disinfectant solution.

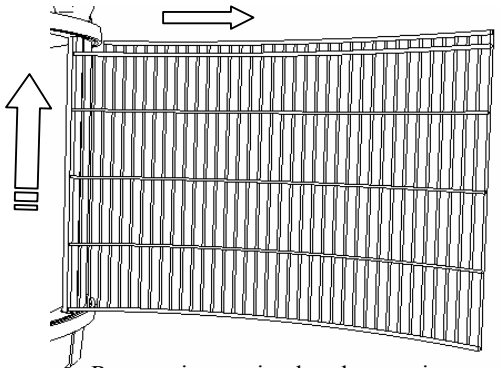
8.3 The exterior of the S10 / S20 may be cleaned with a damp cloth.

On the S20 unit, remove doors to clean hard to reach places.

Removing Outer Door:-



Removing Inner Door:-



Remove inner wire door by opening then lifting the door from its hinges, reverse this technique to put door back in place.

8.4 Always clean the S10 / S20 intensive care unit before storage and ensure that the unit is totally dry inside and out.

8.5 Re-order disinfectant, filters, evaporating block, liners or light bulbs from your Vetario distributor.

9.0 Servicing

IMPORTANT. THE HEATER IS AT MAINS VOLTAGE. NEVER DRILL INTO OR PUNCTURE THE CURVED SIDES OF THE INCUBATOR. RISK OF ELECTRIC SHOCK.

9.1 Replace both filters every six months of use.

9.2 The interior light bulb can be replaced if necessary. Spares are available from your Vetario distributor.

ENSURE THAT THE S10 / S20 IS DISCONNECTED FROM THE MAINS SUPPLY.
Remove the twelve screws that retain the ceiling and replace the bulb with 15 Watt pygmy BC type. Do not exceed the recommended Wattage.

9.3 In case of failure first check that the mains power supply is working and that the mains plug fuse is intact. If the problem persists contact your distributor.

The functional parts of the S10 and S20 are modular and parts are available and are readily exchanged by a suitably qualified person equipped with basic tools.
Fitting instructions are supplied with replacement parts.

10.0 Specification

S10

Construction:	**Top and base mouldings:** structural, insulated polyurethane
	Curved sides: Twin skin ABS
	Door opening frames: Anodised extruded aluminium
	Clear door: 'Plexiglas' or similar scratch resistant clear acrylic
Dimensions :	(External) 475mm high x 450mm diameter (18 ¾" high x 17 ¾" diameter) (Max. Internal) 370mm high x 395mm diameter (14 ½ high x 15 ½" dia.)
Weight:	5.5Kg (12lbs)
Power Consumption:	120 Watts (maximum)
	60 Watts (typical average)
Electrical Supply:	230v 50Hz or 115v 60Hz as ordered

S20

Construction:	**Top and Bottom mouldings:** Structural, insulated Polyurethane
	Curved Sides: Twin skinned ABS
	Door opening frames: Anodised Extruded Aluminium
	Removable Inner Door: Chromed Welded Steel Wire Cage
	Removable Clear Outer Door: Flexible clear 'PETG' sheet plastic with anodised extruded handles
Dimensions:	(External) 760mm Wide x 510mm Deep x 600 High (30" Wide x 20" Deep x 23 ¾" High)
	(Internal) 680mm Wide x 430mm Deep x 470mm High (26 ¾" Wide x 17" Deep x 18 ½" High)
Weight:	10kg (24lbs)
Electrical:	230v, 50Hz or 115v, 60Hz
Supply:	200 watts (Maximum)
	90 watts (Typical Average)

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Vetario Products are manufactured by

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