

HC150

Respiratory Humidifier with Ambient Tracking™

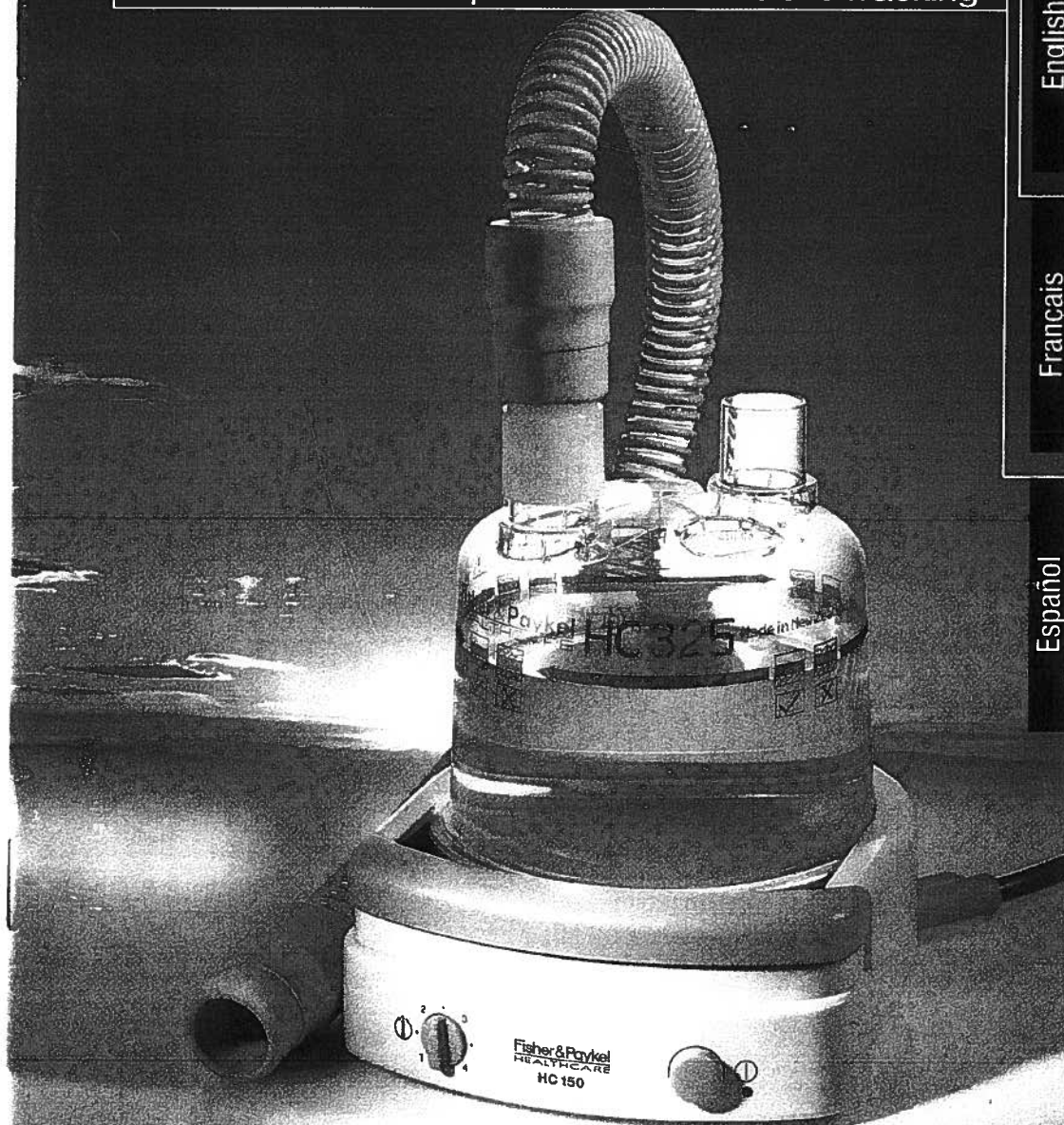
Humidificateur Respiratoire avec Ambient Tracking™

Humidificador Respiratorio con Ambient Tracking™

English

Français

Español



CE 0123

Fisher & Paykel
HEALTHCARE

HC150

RESPIRATORY HUMIDIFIER

with Ambient Tracking™

English



The **HC150 Respiratory Humidifier** is used to warm and humidify gases delivered to patients requiring continuous positive airway pressure (CPAP) therapy or mask ventilation.

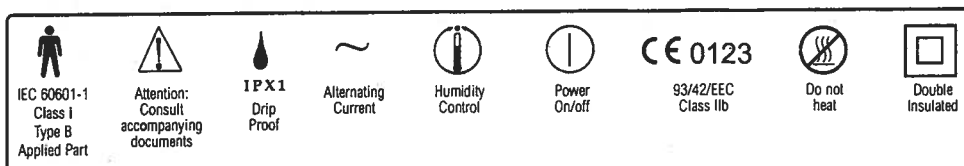
CAUTION: Federal law restricts this device to sale by or on the order of a physician.

READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

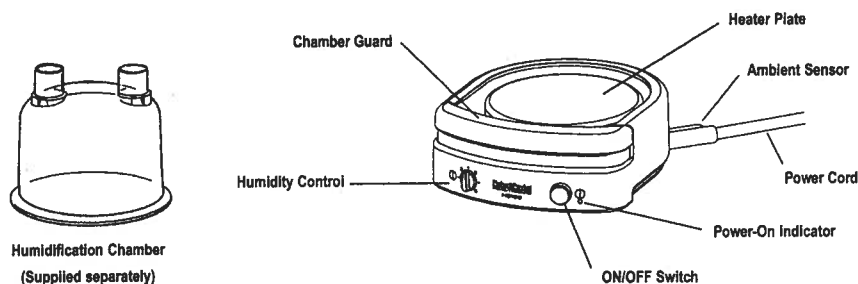
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SYMBOL DEFINITIONS



IMPORTANT PARTS OF YOUR HC150



IMPORTANT SAFEGUARDS

GROUNDING INSTRUCTIONS (for CLASS I models only)

Note: Models labeled as Class II (Double Insulated) are marked with the symbol and do not require grounding. The following applies to Class I (three wire) models only.

The HC150 should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. The HC150 is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

DANGER - Improper use of the grounding plug can result in a risk of electric shock.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the HC150 is properly grounded.

Extension Cords:

If it is necessary to use an extension cord, use only a 3-wire extension cord that has a three-blade grounding plug, and a 3-slot receptacle that fits the HC150 plug. Replace or repair a damaged cord.

In Canada/USA only:

This product is for use on a nominal 115V circuit, and has a grounding plug that looks like the plug illustrated (Figure 1). A temporary adaptor, may be used to connect this plug to a 2-pole receptacle if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet (Figure 1) can be installed by a qualified electrician. The green coloured rigid ear, lug, etc extending from the adaptor, must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by the screw.

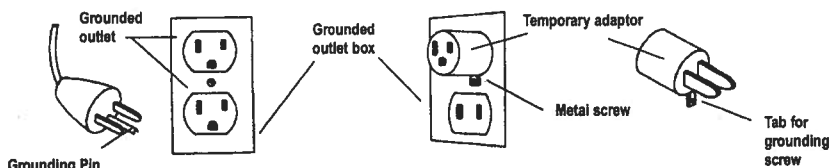


Figure 1: Grounding methods.

If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.

WARNINGS

When using electrical products, especially when children are present, basic safety precautions should always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USE

Danger - To reduce the risk of electrocution:

- * Always unplug the HC150 immediately after use.
- * Do not use the HC150 while bathing.
- * Do not place or store the HC150 where it can fall, or be pulled into a tub or sink.
- * Do not place or drop the HC150 into water or other liquid.
- * If the HC150 does fall into water, do not attempt to retrieve it. Unplug the HC150 immediately.

WARNING - To reduce the risk of burns, electrocution, fire or injury:

- * The HC150 should never be left unattended when plugged in.
- * Close supervision is necessary when the HC150 is used by, on, or near children or invalids.
- * Take care to avoid dropping any items on the HC150.
- * If any damage occurs to the unit, immediately unplug the HC150 and call your Fisher & Paykel Healthcare dealer for assistance.
- * Use the HC150 only for its intended use as described in this manual. Use only accessories recommended by Fisher & Paykel Healthcare.
- * Never operate the HC150 if it has a damaged cord or plug, if it is not working properly, or if any part of either the HC150 or the humidification chamber is dropped or damaged, or dropped into water.
- * Auto titrating devices may not operate correctly when used with a humidifier. Consult the Auto titrating clinical/operating manuals.
- * Keep the cord away from heated surfaces.
- * Never block the air openings of the HC150 or place it on a soft surface such as a bed or couch, where the air openings may be blocked.
- * Keep the air openings free of lint, hair and the like.
- * Never drop or insert any object into any opening or hose.
- * Remove the humidification chamber from the HC150 before filling.
- * The function of this humidifier may be adversely affected by operation of high frequency apparatus or shortwave or microwave equipment in the vicinity.
- * This equipment may radiate radio frequency energy. If interference occurs, try the following:
 - Reorient or relocate the HC150 device
 - Increase the separation between the equipment
 - Connect the equipment into an outlet on a circuit different from that to which the other devices are connected.
- * Do not use the HC150 in the presence of flammable or explosive materials.
- * Equipment not suitable for use in the presence of flammable anaesthetic mixture with air or with oxygen or nitrous oxide.
- * Be sure to comply with all the safety instructions contained in your CPAP or mask ventilator system operating manual.
- * Disconnect supply before servicing.
- * Not for use with patients whose upper airways are bypassed.

CLEANING & MAINTENANCE

Note: The HC150 should be cleaned as needed.

1. Switch off the HC150 and unplug from the power socket.
2. Detach the HC150 from the ventilator system and allow to cool.
3. Wipe the exterior of the HC150 with a clean, damp (not wet) cloth and mild dishwashing detergent. Note: do not use harsh abrasives or solvents, as these may damage the HC150.
4. Daily - Rinse the water chamber and breathing tube with warm soapy water.
5. Weekly - Soak the inside of the chamber for 10 minutes in a solution of one part white vinegar to ten parts water.

WARNING

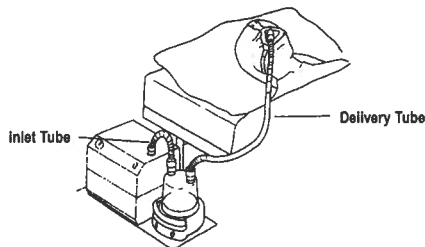
- * Refer maintenance to qualified service personnel.
- * Always switch off the HC150 and unplug the power cord from the power socket before cleaning.
- * Never rinse or place the unit in water or allow water to get into the interior of the unit.
- * Ensure that the unit is dry before plugging into the power socket.

DIRECTIONS FOR USE

The HC150 Heated Respiratory Humidifier is designed for home use with a CPAP or mask ventilator system prescribed by a physician. The HC150 features Ambient Tracking™, which automatically adjusts the heaterplate temperature as the room temperature changes, minimizing condensation. When not in use, the HC150 should be stored in a cool dry place away from direct sunlight.

SETUP

1. It is recommended that the HC150 and the CPAP or mask ventilator system are mounted on a Fisher & Paykel Mounting Tray 900HC007 (also supplied with 900HC105 starter kit).
2. The CPAP or mask ventilator system and HC150 should be positioned on the floor beside the bed rather than on a table.



Typical HC150 Humidifier Setup

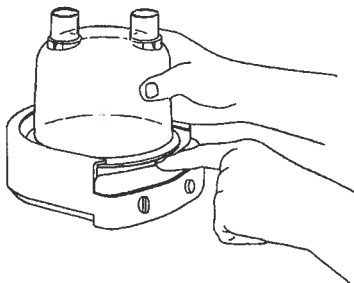
WARNING

- * If a tray is not used, the HC150 should be firmly mounted to avoid the possibility of being pulled over, or water entering the tubing.
- * Whether or not a tray is used, the HC150 should be placed on a flat surface.
- * Do not position the system where it may be stepped on when getting out of bed.
- * If the system must be mounted on a table, it should be mounted securely to avoid the risk of being dislodged during the night.
- * The system should always be placed lower than the patient so that any excess condensation in the tube drains back into the chamber.
- * Do not spill water onto the HC150, CPAP or mask ventilator system.

3. A clean Humidification Chamber should be filled with distilled water to the maximum water level mark.

CAUTION: Use only Fisher & Paykel Healthcare Humidification Chambers which are designed for use with the HC150 Humidifier.

4. Without touching the Heater Plate (which may be hot), hold the Chamber Guard down and slide the Humidification Chamber onto the top of the HC150.



Sliding the Humidification Chamber onto the HC150.

5. Attach the inlet tube between the air outlet of the CPAP or mask ventilator system and the air inlet of the Humidification Chamber.
6. A long length of tube (delivery tube) is supplied with your CPAP or mask ventilator system. Attach one end to the mask and the other end to the air outlet of the Humidification Chamber.

OPERATION

CAUTION: Switch the HC150 humidifier off when not in use.

1. Plug the HC150 Power Cord into a power socket. The power supply must be the same voltage as that specified on the underside label.

CAUTION: Your HC150 is designed to work on one voltage power supply. If you are travelling to a different country you may need an appropriate power transformer or a different HC150.

2. Plug in and switch on the CPAP or mask ventilator system following the instructions in the operating manual.
3. Check that there is a flow of air through the tubing and out from the mask.

NOTE: If there is no airflow, either the tubing and humidifier are not connected correctly or the CPAP or mask ventilator unit is not functioning.

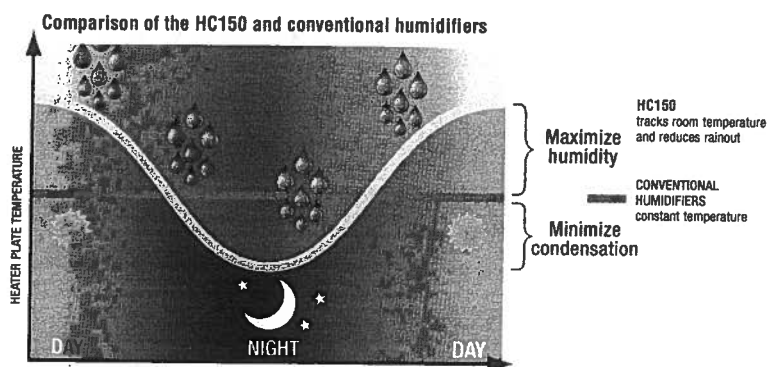
4. Switch on the HC150 using the ON/OFF Switch. The Power-On Indicator will be lit continuously while the unit is powered and switched on.
5. Turn the Heater Control to the setting required. See 'Controlling the Humidity'.
6. Allow at least 20 minutes for the HC150 to stabilise after adjustment of the Heater Control.
7. Apply mask and use as directed by your physician and according to the instructions in your CPAP or mask ventilator system operating manual.

WARNING

- *Should the airflow be stopped or interrupted, take off the mask and turn off the HC150. When the airflow is resumed, switch on the HC150 and allow 20 minutes for it to stabilise.*
- *Do not touch the Heater Plate. The Heater Plate temperature may exceed 65°C (149°F).*
- *Do not touch the base of the chamber when it is removed from the hot Heater Plate. The base will take some time to cool.*
- *Ensure the airflow does not splash water from the Humidification Chamber into the delivery tube.*
- *Ensure the tubes are not kinked or otherwise obstructed.*

AMBIENT TRACKING™

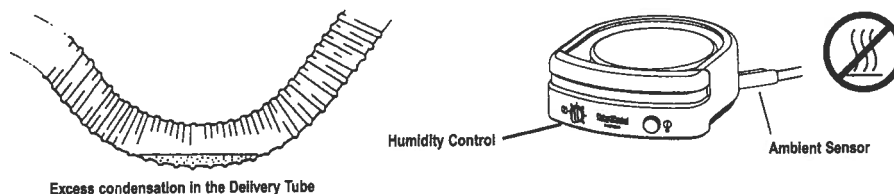
The HC150 is equipped with **Ambient Tracking™**, the next generation in CPAP humidification. During the night, room temperatures often drop. When this occurs, heated humidification users commonly notice excess condensation and water droplets forming in the tubing. To overcome this, Fisher & Paykel Healthcare has developed **Ambient Tracking™**.



Through advanced electronics, **Ambient Tracking™** automatically adjusts the heater plate temperature as the room temperature changes. Condensation is minimized while humidity is maximized.

CONTROLLING THE HUMIDITY

1. If a Humidity Control setting has been recommended by your physician, you should start with this. Under "normal" conditions, a setting of 2 is satisfactory.
 2. When the HC150 has been in use for 20 minutes or more, check that there is fine misting in the last 15cm (6") of the tube closest to the mask. If this is the case, the HC150 is set to the optimal humidity setting for that environment.
 3. If there is more misting in the tube than necessary, reduce the setting on the Humidity Control.
 4. If there is not enough misting in the tube, increase the setting on the Humidity Control.
- Note: Ambient Tracking™ minimizes the need to re-adjust the Humidity Control. (See Ambient Tracking™)



WARNING

- * Ensure that the ambient sensor is kept well away from heat sources.
- * Do not set the Humidity Control so high that excess condensation can accumulate in the delivery tube.
- * The breathing tube should always be arranged so that any excess condensation drains back to the chamber.

TROUBLESHOOTING

The HC150 contains no user serviceable parts. If you believe your unit is not working properly, please take a few moments to check the following table. If the problem persists, please contact your local Fisher & Paykel Healthcare office.

SYMPTOMS	POSSIBLE CAUSES	REMEDIES
Unit does not switch on: Power-on indicator not lit.	<ol style="list-style-type: none"> 1. Unit not plugged into live power socket. 2. Unit not correctly plugged in, switched on at the socket and the ON/OFF switch set to ON. 3. Blown fuse or tripped thermal cutout. 	<ol style="list-style-type: none"> 1. Plug power cord into a live power socket. 2. Check that the unit is plugged firmly into the socket and that the switches are turned on. 3. Contact your Fisher & Paykel Healthcare service centre or dealer.
Air not flowing through mask.	<ol style="list-style-type: none"> 1. CPAP or mask ventilator system not switched on or working correctly. 2. Tubes not connected properly to humidification chamber. 3. Tubes blocked. 4. Humidification chamber overfilled. 	<ol style="list-style-type: none"> 1. Consult CPAP or mask ventilator system operating manual. 2. Connect as described in Directions for Use. 3. Unblock tubes. 4. Empty excess water from chamber so the level is at the maximum level mark.
Excessive condensation in tube.	<ol style="list-style-type: none"> 1. Humidity control setting too high. 2. Ambient sensor near heat source. 	<ol style="list-style-type: none"> 1. Reduce humidity control setting. 2. Move HC150, or move the heat source away from the ambient sensor.

ACCESSORIES AVAILABLE

900HC105: Starter Kit (recommended)

900HC008: Tube (61cm/24")

900HC221: Tube (183cm/72")


900HC007: Mounting Tray

HC325D: 2 x HC325 Chamber

HC300: 1 x HC300 Dishwashable Chamber

For more information, please consult the Fisher & Paykel Healthcare Product Catalog or go to our website: www.fphcare.com

PRODUCT SPECIFICATIONS

Size:	5.4 cm high x 13.2 cm x 14.6 cm (2.1"x 5.2"x 5.7")
Weight:	0.7 kg (1.5 lbs)
Electrical Ratings:	
Electrical Supply Frequency:	50 - 60 Hz
Power Consumption:	92 W maximum
Voltage and Current:	230 V model 230 V \pm 20 V, 0.4 A maximum at 230 V 115 V model 115 V, 0.8 A maximum at 115 V 100 V model 100 V \pm 10 V, 0.9 A maximum at 100 V
Suitable for use with a DC to AC inverter:	150W minimum
Heaterplate Cutout:	93°C(199°F) \pm 5°C(9°F)
Power/Temperature Control:	Settings of 1(minimum) - 4(maximum) Heater Plate Temperature from approx. 30°C to approx. 65°C (86°F to 149°F) Continuous mode of operation.
Standards Compliance:	Note: The HC150 is Class I unless marked with the  symbol
	Designed to conform to requirements of:
	IEC 60601.1 CAN/CSA-C22.2 No.68
	EN 60601-1 UL 1431 AS/NZS 3200.1.0

English

Patents Pending in Principal Countries of the World

OPERATING INSTRUCTIONS HUMIDIFICATION STARTER KIT

(Instructions for the 900HC105 Humidification Starter Kits)

EN

Introduction

The Fisher & Paykel Humidification Starter Kit has been designed for use with Nasal CPAP and Nasal Mask ventilation systems. The Starter Kit can be used immediately as a cold passover humidifier. For those who suffer from mouth leak or nasal symptoms as a result of their treatment, it is recommended that the Starter Kit be upgraded by adding the HC100 Heated Humidifier. The HC100 will heat the water in the HC325 chamber and provide significantly more humidity (around 80% greater than Cold Passover systems). The following instructions show installation procedures for cold and heated passover plus use and care of the HC325.

Installation

The kits include one Multi Purpose Mounting Tray, two HC325 chambers, one Inlet Tube and one Chamber Connector.

Cold Passover Operation

The tray is designed to have your CPAP or Bilevel type blower placed on the left side of the tray as shown in Fig 1.

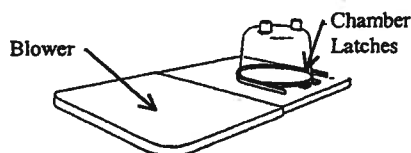


Fig 1. Mounting Tray showing HC325 chamber fitted.

Heated Passover Operation

1. Remove the chamber retaining ring from the tray by releasing the five clips as shown in Fig 2.

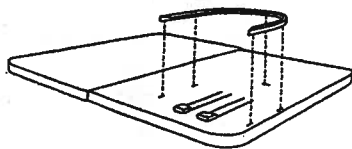


Fig 2. Removing the chamber retaining ring.

2. Secure the HC100 onto the tray by fastening the two screws supplied with the Mounting Tray, as shown in Fig 3.

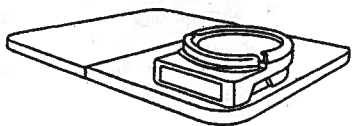


Fig 3. Mounting the HC100.

3. Position the tray on the floor beside the bed and place the blower system on the tray to the left of the HC100.
4. Refer to your HC100 Operating Manual and the following Use and Care information, for further instructions before use.

Use and Care of the HC325 Humidification Chamber.

Replace the HC325 if any of the following conditions develop:

- Damage to the chamber
- Leaks (air or water)
- Reduction in Humidifier performance
- Poor hygiene or chamber maintenance by user

1. Remove the blue caps from the chamber ports.
2. Fill the HC325 with distilled water preferably warmed to at least room temperature, but no hotter than 37°C (98°F).

CAUTION: Do not use tap water in the HC325. The use of tap water in the HC325 may result in mineral deposits that could impair the performance and shorten the life of the chamber.

WARNING

- Do not fill past the maximum water level line
- Do not fill HC325 with boiling water
- Limit use to one person only

3. Slide the chamber into position on the tray until both chamber latches spring up, as shown in Fig 1.
4. Connect the Inlet Tube to either of the ports of the HC325 as shown in Fig 4. The other end of the Inlet Tube connects to the blower.

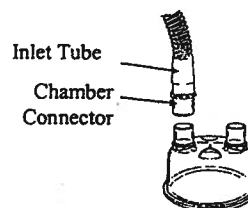


Fig 4. Connecting the Inlet Tube.

5. Connect the CPAP delivery tube to the other port of the HC325 using the chamber connector as shown in Fig 5. The other end of the delivery hose will be fitted to the mask.

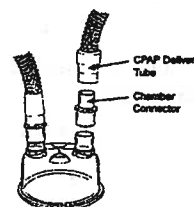


Fig 5. Connecting the CPAP delivery tube.

6. The system is now ready for use. Follow the instructions of your CPAP Operating Manual for information about operating your blower system.
7. After use, disconnect the tubes from the top of the HC325, depress the chamber retaining latches and slide the HC325 off the tray or heater plate. Discard any water remaining in the HC325.
8. Wash the HC325 in a solution of dishwashing detergent and warm water, then rinse thoroughly in clean water and leave to air dry.
9. If you wish to disinfect the HC325, you may soak it in a solution of vinegar (1 part) and water (10 parts), for 10 minutes. Rinse thoroughly in clean water.

WARNING

- Do not place HC325 in Dishwasher

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