HEAT/MOISTURE EXCHANGERS







FH-10021 10/box FH-10031 20/box FH-10041 20/box

FH-10011 30/box FH-11012 20/box

Product: Humid-Vent® Micro Humid-Vent® Mini Part Number: FH-10021 FH-10031 FH-10041 FH-10011 3.5 3.0 E.T. Tube Size: 4.0 10 - 50 ml Tidal Volume: 5-50 ml Indications: Neonate, Sterile Neonate, Infant, Pediatric

Sterile Filter Dead Space: 2.4 ml 13 ml 1.1 ml Weight: 2.9 g 4.5 g 14.5 g Moisture Output: Vt10-33.2 mg H₂O/I medical air Filtration: 99.9+% BFE

> Vt20-30.5 mg H₂O/I medical air and VFE Vt20-30.0 mg H₂O/I medical air

Maximum resistance at 5 lpm Resistance: Maximum resistance at 7 lpm Moisture Vt50-32.9 mg H₂O/Lair Tube Size Micro Std. Adapter 5 l/min. max. 0.6 cm H₂O Output: Vt100-30.0 mg H₂O/L air 3.0 2.7 cm H₂O 2.1 cm H₂O 10 l/min. max. 0.9 cm H₂O Vt250-25.1 mg H2O/Lair 3.5 1.7 cm H₂O 1.1 cm H₂O 15 l/min. max. 1.4 cm H₂O Resistance: Maximum Resistance: 4.0 1.2 cm H₂O 0.65 cm H₂O

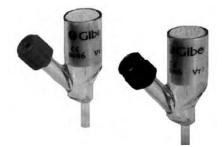
@ 20 lpm 1.4 cm H₂O

Humid-Vent® Micro

50 - 250 ml

Pediatric HME/

FH-11012



Specifications:

FH-10121 sterile - 3.0 mm Dead space: 2.7 ml Connectors ISO 5356-1:

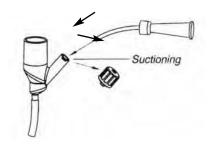
3.0/15 mm blue cap 3.5/15 mm red cap

Medium: Hygroscopic, naturally absorbent, microwell paper. Bacteriostatic

Resistance to Flow:

Humid-Vent Micro+ Standard E.T. - Tube Adapter 3.0 mm 1.8 cm H₂O at 5 l/min 3.0 mm 1.7 cm H₂O at 5 I/min 3.5 mm 1.1 cm H₂O at 5 l/min 3.5 mm 0.9 cm H₂O at 5 I/min Moisture Output: ISO 9360 VT 10, 32.5 mg H₂O/I medical air VT 20, 32.0 mg H2O/I medical air Humidification for neonates

- · Now with easy access, non-disconnect suction port
- · Low resistance to flow
- Lightweight
- · For single-use only
- · Moisture output meets and/or exceeds ISO standard 8185 for active humidifiers



FH-10131 sterile - 3.5 mm

Weight: 4.3 g



Heat/Moisture Exchangers



Humid-Vent® HME/Bacterial/Viral Filter Less Dead Space FH-19402 Straight/Clean 25/Box

FH-19402 - Humid-Vent Filter Compact

· Dead Space

Angled 38 ml, Straight 35 ml

· Weight

Angled 32.3 g, Straight 31 g

Connectors

15/22 - 22/15 mm, ISO 5356-1

• Medium

HME part Hygroscopic, naturally absorbent microwell paper. Bacteriostatic Filter Hydrophobic, electrostatically charged.

· Resistance to Flow

at 69 l/min, typical value 2.4 cm H₂O

· Moisture Output*

 $31~{\rm mg}~{\rm H_2O/L}$ medical air at VT 600 ml 30 mg H₂O/L medical air at VT 800 ml 30 mg H2O/L medical air at VT 1200 ml

Packaging

Individually packed 25 units per box

- Bacterial/Viral efficiency** 99.99+%
- · Mfg. date and lot number on all packaging
- Instructions for Use in box.
- * Tested in accordance with ISO standard 9360.
- **BFE and VFE tests performed by independent laboratory. Records on file.

Oxy-Vent

Part # FH-41112 50/bx
Indications: Weaning, Transport, Trach
Tidal Volume: 50 ml+

Trach-Vent

Dead Space: 10 ml Weight: 4 grams

Moisture Output: Vt500-27.0mg H₂O L

Medical air

FH-45512 10/bx Supplemental O₂ Approximate O₂

i
<u>02</u>
25%
30%
35%
40%

Humid-Vent® Filter 2 Lightweight HME/Filter FH-19932 Straight/FH-18832 - 90° Angle

FH-19932 - straight 20/box FH-18832 - 90° angle 20/box

Tidal Volume: 300 - 1500 ml

Indications: High Performance HME and Filter

Dead Space: 60 ml Weight: 30 grams

Filtration:

99.9+% BFE and VFE

A.H./15 BPR

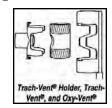
 VT
 Humidity

 600 ml
 31 mg/l

 1200 ml
 30 mg/l

Maximum Resistance to Flow:

Trach-Vent® System



 Trach-Vent
 Trach

 Holder
 Band

 FH-61112 30/bx
 FH-63352 20/bx

 Comfort Clip
 (not shown)

Trach-Vent Starter Kit

Product:

FH-41172 6/bx Each Kit Contains: 3 Track-Vents

1 Track-Vent Holder

1 Oxy-Vent w/tubing

SoftFlex™ FH-1800402 - Clean. Weight: 4.4 g. Length: 11.4 cm. Dead space: 31 ml. Connectors: 15mm Female, 22 mm Female. 100/box



- 1. Tested in accordance with ISO 9360.
- 2. Challenged with Staphylococcus Aureus and Phi X 174

Smooth-Bor® Flex- FH-20011. Sterile ISO Connectors.

Weight: 12.5 g. Length: 18 cm. Dead

space: 30 ml.

Connectors: 15mm Female, 15mm Male. 20/box



Heat/Moisture Exchangers



Humid-Vent® 2S FH-14412 20/box

Product

Humid-Vent 2S

Part #:

FH-14412

Tidal Volume:

150 - 1500 ml

Indications:

General Anesthesia

and ICU

Dead Space:

29 ml

Weight: 19.8 grams

Moisture Output: V_t300-31.0mg H2O/I air

V_t800-27.0mg H2O/I air V_t1200-26.0mg H2O/I air

Maximum Resistance

@20 lpm 0.2cm H₂O @40 lpm 0.5cm H₂O

@60 lpm 0.8cm H₂O



Humid-Vent® Port FH-13312 20/box

Humid-Vent 2 Port

FH-13312

150-1500 ml

General Anesthesia

and ICU 29 ml

20.9 grams

V_t600-28.0mg H2O/I air

V_t800-27.0mg H2O/I air V_t1200-26.0mg H2O/I air

Maximum Resistance

@20 lpm 0.2cm H₂O

@40 lpm 0.5cm H₂O

@60 lpm 0.8cm H₂O



Humid-Vent® 2S Flex FH-17731 20/box

Product

Part # FH-17731

Humid-Vent 2S Flex

(15mm Male/22mm Female)

Tidal Volume: 250 - 1500 ml

Sterile HME w/flex tube Indications:

Dead Space: 54 ml Weight: 26.4 grams

Moisture Output: V_t600-29.0 mg H₂O/I air

 $V_{t}1200-28.0 \text{ mg H}_{2}O/I \text{ air}$

Resistance: **Maximum Resistance**

> @20 lpm 0.2cm H₂O @40 lpm 0.5cm H₂O @60 lpm 0.9cm H₂O

Product **Humid-Vent 1**

Part #: FH-11112

Connectors: 15/22-15mm. ISO 5356-1

Tidal Volume: 50 - 600 ml

Indications: General Anesthesia

and ICU

Dead Space: 10 ml

Weight: 9.4 grams Moisture Output: V_t200-30.5 mg H₂O/I air

V_t600-24.0 mg H₂O/I air

Resistance:

Maximum Resistance @20 lpm 0.3cm H₂O @40 lpm 0.7cm H₂O @60 lpm 1.2cm H₂O

Product **Humid-Vent 1 Port Humid-Vent 1 Port Elbow Humid-Vent 1 Elbow**

Part #: FH-11132 FH-11142-50

FH-11152-50

Connectors:

15/22-15mm. ISO 5356-1

Tidal Volume: Indications:

50 - 600 ml

General Anesthesia and ICU

Dead Space:

14 ml 9.8 grams

Weight:

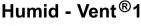
Moisture Output: V_t200-30.5 mg H₂O/I air

V_t600-24.0 mg H₂O/I air

Resistance:

Maximum Resistance @20 lpm 0.2cm H₂O @40 lpm 0.7cm $H_{2}^{-}O$

@60 lpm 1.2cm H₂O





Humid-Vent 1 Port FH-11132 25/bx

Humid-Vent 1 FH-11112 50/bx

Tested in accordance with ISO Standard 9360

"Safety-Glo"™

COOL SPRAY HUMIDIFIERS

The Humidifiers that Glow in the Dark!



Model #644

1.0 Gallon Humidifier

- 24 hours of continuous operation in one filling
- · Easy to drain and clean
- · Patented impeller tip allows you to adjust the output and run times
- · Better dispersion of water means no more wet floors
- · Computer balanced impeller disks for quieter operation
- · Multiple fill lines to customize run times
- · Thermostat motors to prevent overheating
- · 2 year Limited Warranty

28-644

1.5 Gallon Humidifier

- · 35 hours of continuous operation in one filling
- · Easy to drain and clean
- · Patented impeller tip allows you to adjust the output and run times
- · Better dispersion of water means no more wet floors
- · Computer balanced impeller disks for quieter operation
- · Multiple fill lines to customize run times
- · Thermostat motors to prevent overheating
- · On/Off switch
- · 2 year Limited Warranty

28-645



Model #645



Model #646

2.0 Gallon Humidifier

- 47 hours of continuous operation in one filling
- · Extra long cord for greater outlet access
- · Easy to drain and clean
- Patented impeller tip allows you to adjust the output and run times
- · Better dispersion of water means no more wet floors
- · Computer balanced impeller disks for quieter operation
- · Multiple fill lines to customize run times
- · Thermostat motors to prevent overheating
- On/Off switch
- · 2 year Limited Warranty

28-646



Humidifier/Vaporizer

Bacteriostat

#28-6609

Humidifier/Vaporizer Cleaner #28-6614

Safety-Glo® is a registered trademark of Sunbeam Corporation



THERA-MIST™ HUMIDIFIERS FEATURE TOTAL ASEPTIC ISOLATION

The Thera-Mist Humidifier System totally eliminates potential patient cross-contamination inherent in other humidifier systems. All Thera-Mist Humidifier Systems feature a unique molded-in heat transfer disk that isolates the **BN-P20000** Heater from the humidification chamber. Neither the gas stream nor the water come in contact with the heater surfaces. Therefore, the heater does not require routine sterilization.

THERA-MIST™ HUMIDIFIER

The Thera-Mist Humidifier **BN-P35000**, is the simplest, most economical Heated Humidifier available. The patented wick system keeps the water level well below the level of the patient supply ports at all times. Its use is recommended for Ventilators, Halos, CPAP, Trach-Care, and Home-Care. Safe at all flows, the **BN-P35000** is recommended for flows and minute-volumes up to 20LPM. The Humidifier is heated by the **BN-P20000** Heater. The **BN-P35000** Humidifier is pictured with the **BN-P20000** heater, **BN-P23000** pole or wall mount bracket and **BN-P70000** reusable 1000 ml bottle.



VENTILATOR SET-UP THERA-MIST™ HUMIDIFIER



The **BN-P35000** Humidifier 20/box is shown on the Vision BiPAP ventilator. The Thera-Mist Humidifier can easily be adapted to any ventilator. It is currently being used on 7200's Bear Ventilators, LP-10's and many others, including wheel-chair ventilator applications.

THERA-MIST™ HOME CARE HUMIDIFIER

The Thera-Mist Home Care Humidifier **BN-P39000**, adapted from the Thera-Mist Hospital Version **BN-P35000**, is particularly convenient for Home-Care CPAP. The tray itself contains the water reservoir and a sturdy area to place many popular CPAP systems. The **BN-P20000HC** Heater is mounted on the reservoir lid and is easily removed to allow dishwasher cleaning of the tray and lid. The CPAP tray is also available without the heater (**BN-P39001**) for cold pass-over humidification.



Reduce occurrence of

unnecessary audible

temperature no

CONCHATHERM® IV Plus Heated Humidifier (21- volt)

The ConchaTherm IV Plus offers the proven performance and versatility of the ConchaTherm IV plus the additional features requested by clinicians.

- · Adjustable Pause Mode allows selection of pause intervals from five to sixty minutes, in five minute increments.
- User-Selected Default Settings provide "customization" of airway temperature and gradient values.
- #05-400-50 · Self-correcting High and Low Temperature Alarms reduce occurrence of unnecessary audible alarms after the temperature normalizes.
- Expanded Patient Temperature Option increases the upper temperature capability to 39° C in both the adult and infant modes.

The need for humidification is vital to a patient's well-being. The CONCHATHERM® family of products provides heated molecular humidity for patients of all ages, from neonatal to adult. The various models of heaters are safe, effective, reliable and convenient to use, while delivering optimal humidity and temperature to the patient. The CONCHA® system of heated humidification consists of the CONCHATHERM heated humidifier, the CONCHACOLUMN® humidifier cartridge, CONCHA sterile water reservoir and a circuit for delivery of heated and humidified respiratory gases to the patient. Whether the choice is the simplicity of the CONCHATHERM III® or the advanced microprocessor technology of the CONCHATHERM IV, Hudson RCI provides

airway temperature and gradient values

in five minute

increments.

the most complete systems available. All CONCHATHERM humidifiers have multiple mounting capabilities and can be used with a variety of accessories.

Universal Clamp #05-386-09

Pole Mount, Short Support Arm #05-386-50 Approximately 4.75"

Mounting Bracket for BEAR 1, 2, 3 and 1000 Ventilators

#05-386-51

Increases upper temperature capability to 39° C in both adult and infant modes.

> Pole Mount, Extended Support Arm #05-386-52 Approximately 7.25"

Mounting Bracket for the Infrasonics Adult STAR Ventilator #05-386-53

Mounting Bracket for the Bird VIP, 6400 and 8400 Ventilators #05-386-64





CONCHATHERM IV Humidifier Heater (21-Volt)

- · For use in adult or infant mode with a choice of conventional or heated-wire breathing circuits.
- · Advanced micro-processor technology for control of temperature and, when utilized, heated-wire function.
- · Digital airway temperature display and column temperature display at the touch of a button.
- · 20-minute "pause" mode for use during delivery of nebulized medication therapy or circuit changed.
- · Advanced audio and visual alarm package includes tracking alarms for high/low proximal airway temperature, thermistor probe alarms and heated-wire disconnect.
- 115 V. 60 Hz

Mounting Bracket for the Puritan-Bennett 7200 Ventilator #05-386-71

Mounting Bracket for the Siemens Servo Ventilator #05-386-74

Mini-Reservoir Bracket Plate (not shown) #05-386-66

Humid-Heat System

The Humid Heat System heats and humidifies inspired breathing gases as close to the patient as possible, minimizing problems associated with condensation, and the handling of large volumes of water, heated wires and water traps.

The Humid-Heat System retains heat and moisture expired by the patient in a passive HME. It then ads just the amount of heat and humidity needed to bring the inspired breathing gases to alveolar conditions.

Humid-Heat has preset values for temperatures and humidity. The only parameter that needs to be set is the value of the minute volume of the ventilator. Still Humid-Heat ensures that the patient receives 100% relative humidity at 37° C, i.e. 44mg H₂O/I breathing gas.

• Working range: Tidal Volume: 250-1500 ml, Minute Volume: 3-30 l/min

· Each Humid Heat complete system consists of: 1 supply unit, 1 angular clamp, 1 heater, 5 temperature probes, 10 water feed sets, 20 A-HMEs

Ordering Information			
Part#	Quantity	Description	
#05-37101	1 Kit	Humid-Heat Complete System	
#05-37110	1	Humid-Heat Supply Unit	
#05-37160	1	Humid-Heat Heater	
#05-37170	5	Humid-Heat Temperature Probe	
#05-37152	10	Humid-Heat Vented Water Feed Set	
#05-37130	20	A-HME	
#05-37180	1	Humid-Heat Clamp for Rail 10x25 mm	
#05-37182	1	Humid-Heat Clamp for Rail 10x30 mm	
#05-37184	1	Humid-Heat Angular Clamp	
#05-37185	1	Humid-Heat Mounting Pole	
#05-37187	1	Humid-Heat Reservoir Holder	

The time-tested simplicity, safety and reliability of the CONCHATHERM® heated humidifier is available in several models. The CONCHATHERM and the CONCHATHERM III® provide heated humidification in continuous flow or pressurized applications when conventional circuitry is used. The CONCHATHERM III Plus offers the additional option of using heated-wire circuitry to aid in the control of condensate in the tubing.

Pediatric CONCHATHERM Heater — #05-380-10

- Similar to #05-380-00 CONCHATHERM except calibrated for pediatric and neonatal ventilator flows.
- · Silent humidification and low output temperatures allow use with a blender, oxyhood or oxygen diluter.

Reservoir Bracket for #05-380-00 and #05-380-10 — #05-386-00

Universal Pole Mount Bracket — #05-386-10

Wall Bracket — #05-386-40

Bird VIP, 6400ST and 8400ST Ventilator Bracket - #05-386-65 Puritan-Bennett 7200 Ventilator Bracket — #05-386-72

Siemens and ADVENT Ventilator Bracket — #05-386-75

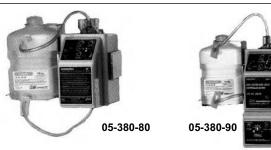
LP6, LP10, PLV-100, Puritan-Bennett COMPANION 2801 Ventilator Bracket — #05-386-76

Universal Ventilator Bracket for MA-1, MA-2, MA 2 + 2, BEAR 5 and 1000 - #05-386-70

Reservoir Bracket for #05-380-80, #05-380-88, #05-380-90 — #05-386-81

Mini-Reservoir Bracket for #05-380-80, #05-380-88, #05-380-90 — **#05-386-79**

Puritan-Bennett PB-2800 Ventilator Bracket (not shown) — #05-386-78



CONCHATHERM III Plus Humidifier Heater

#05-380-88 (21-volt)

#05-380-90 (16-volt)

- For use with conventional or heated-wire breathing circuits.
- · Servo-controlled heater monitors the humidifier heat output; the wire controller regulates heat within the breathing circuit for minimal condensation.
- · Digital temperature display with audio/visual alarms for high/low temperature.

CONCHATHERM Heater — #05-380-00

- · Provides molecular humidification at adult ventilator flow rates of 5 to 35 LPM
- · Simple design includes a control panel with on/off switch and indicator light and a calibrated temperature control.
- · Accepts an in-line thermometer and can be converted to a heated nebulizer using Product #05-388-28 adapter.

CONCHATHERM III Humidifier Heater

U.S. Patent No. 4,110,419 and patents in selected other countries. #05-380-80

- For use with conventional breathing circuits.
- · High-volume, molecular humidifier heater with servo-control, monitors and regulates heat output at the humidifier.
- Can be used with continuous flow or pressurized systems.
- · Preset high- and low-temperature alarms.



Humidifiers/Accessories

A variety of temperature probes, adapters and attachments designed specifically for CONCHATHERM® heated humidifiers enhance the CONCHA system's versatility and adaptability. Probes are sold individually. Adapters are packaged in the case quantities indicated.

Adult Probe Adapter

Product #05-380-74 Packaged 24/box

CONCHA Tubing Adapter (narrow Bore)

Product #05-384-00 Packaged 30/box

CONCHA Hose Adapter (5/16")

Product #05-384-10 Packaged 30/box



CONCHAPAK MINI

Product #05-381-53 (440 mL) Product #05-381-55 (760 mL)

- Low compliance CONCHACOLUMN with vertical ports and CONCHA MINI sterile water reservoir.
- · Packaged 6/box

CONCHAPAK MINI

Product #05-381-54 (440 mL) Product #05-381-56 (760 mL)

- Standard CONCHA-COLUMN with right angle port and CONCHA MINI sterile water reservoir.
- Packaged 6/box

Standard Columns

- For use in most adult ventilatory applications.
- Compressible volume: 103 mL when reservoir is full; 268 mL when reservoir is at refill line.

CONCHA Reservoir

Product #05-381-50

- CONCHA sterile water 1650 mL reservoir
- Packaged 6/box

CONCHA Nebulizer Adapter

Product #05-388-28

- Adjustable 28% to 90%.
- Packaged 30/box

AQUAPAK® 37 In-Line Temperature Indicator (°C)

Product #05-390-45

Packaged 10/box

CONCHA Oxygen Diluter

Product #05-384-26

- Adjustable 26% to 90%
- Packaged 30/box

Ported Elbow Adapter (not shown)

Product #05-1673

Packaged 50/box

Adult Dual-Thermistor Probe

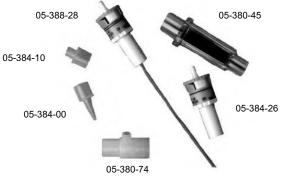
Product #05-380-89 - 84" Product #05-380-89L - 96"

- For use with Part #05-400-00 CONCHATHERM IV series. or Part #05-380-88 CONCHATHERM III® plus.
- Right angle proximal probe.

Adult Thermistor Probe

Product #05-380-92 - 84"

- For use with Part #05-380-80 CONCHATHERM III and conventional ventilator circuit
- Right angle proximal probe.



Pediatric Dual-Thermistor Probe

Product #05-380-91 - 64"

- For use with Part #05-400-00 CONCHATHERM IV series or Part #05-380-90 CONCHATHERM III Plus.
- Straight-tip proximal probe.

Pediatric Thermistor Probe Product #05-380-93 - 64"

- For use with Part #05-380-80 CONCHATHERM III and conventional pediatric ventilator circuit.
- Straight-tip proximal probe.

CONCHA Reservoir

Product #05-381-50

- CONCHA sterile water 1650 mL reservoir
- Packaged 6/box

CONCHA MINI Reservoir

Product #05381-51

- CONCHA MINI sterile water 440 mL reservoir
- Packaged 20/box

CONCHA MINI Reservoir

Product #05-381-52

 CONCHA MINI sterile water 760 mL reservoir Packaged 10/box

Low-Compliance Columns

- For use in most applications requiring more constant compressible volume and compliance or CPAP applications with continuous gas flow less than 50 LPM.
- Compressible volume: 248 mL ± 12 mL.
- Compliance: 0.25 mL cm H2O.



CONCHAPAK

Product #05-385-20 (Right angle port) Product #05-385-30 (Vertical ports)

- Low compliance CONCHA-COLUMN® with CONCHA® sterile water 1650 mL reservoir
- Packaged 6/box

CONCHAPAK

Product #05-385-60 (Right angle port) Product #05-385-70 (Vertical ports)

- Standard CONCHA-COLUMN with CONCHA sterile water 1650 mL.
- Packaged 6/box

Humidifiers/Nebulizers



Part Number 32-34-10-0001

Description

Reusable Humidifier is highly efficient, durable and completely autoclavable. The top is metal and includes a swivel outlet for small bore tubing which makes possible easy adjustment for patient comfort. The metal top also includes a safety relief valve with whistle that gives an alarm if the hose from the unit to the patient is pinched off or if the tubing is clogged. The oxygen flow is broken up by stainless steel diffuser rings. No clogging, no mineral build-up, no blockage of oxygen flow and no jets to clean.



Part Number **32-34-10-0003**

Description

Reusable Nebulizer is durable and completely autoclavable. The top is metal and includes a swivel outlet for large bore tubing which simplifies positioning for patient comfort. The metal top also includes a steady relief valve with whistle that signals pinching of patient supply tubing.



Part Number **32-34-10-0005**

Description

Reusable Humidifier - The plastic cap and reservoir humidifier is designed to add moisture to dry gas by bubbling the gas through water, thereby offsetting the drying effect of the gas. The humidifier includes pressure relief valve and an unbreakable polypropylene jar which is completely autoclavable.

Part Number **32-34-10-0025**

Description

Reusable Humidifier

Box of 12



Humidifiers feature high performance diffuser, audible pop-off valve and 300cc working volume capacity at maximum fill line.

- Single Patient Use/Disposable
- Please Observe Maximum and Refill Lines

Humidifier with Metal Nut

BR-64376 Metal Nut Humidifier 50/box

Humidifier with Plastic Nut

BR-64375 Plastic Nut Humidifier 50/box

Humidifier Snap-On System

BR-64370 Humidifier with quick connect coupler BR-64369 Quick connect coupler with quick release action design, chrome-plated

50/box

10/box