HOVERTECH
an Etac Company

HT-Air® 2300

Air Supply

User Manual

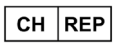
MD

CE

Visit www.HoverMatt.com for other languages

TABLE OF CONTENTS

Symbol Reference

	CE MARKING OF CONFORMITY		OPERATING INSTRUCTIONS
	UK MARKING OF CONFORMITY		KEEP DRY
	AUTHORIZED REPRESENTATIVE		LATEX FREE
	UK RESPONSIBLE PERSON		LOT NUMBER
	SWITZERLAND AUTHORIZED REPRESENTATIVE		MANUFACTURER
	ALTERNATING CURRENT		DATE OF MANUFACTURE
	TYPE BF APPLIED PART		MEDICAL DEVICE
	CAUTION / WARNING		PROTECTIVE EARTH
	MANUAL CLEANING		SERIAL NUMBER
	DISPOSAL		TEMPERATURE LIMITATION
	ELECTRICAL AND ELECTRONIC EQUIPMENT		THIS END UP
	HUMIDITY LIMITATION		UNIQUE DEVICE IDENTIFIER
	IMPORTER		

DECLARATION OF CONFORMITY

This product conforms to the requirements of Medical Devices Regulation (2017/745).

Intended Use and Precautions

The HT-Air® 2300 Air Supply provides six airflow options to inflate HoverTech's air-assisted transfer, lift, and positioning devices.

The Air Supply is used along with HoverTech's air assisted devices to assist caregivers with patient transfers, positioning, turning and proning.

INTENDED CARE SETTINGS

Hospitals, long-term or extended care facilities

INTENDED USERS

- The caregiver/operator is the person handling the equipment.
- The patient is not the intended operator.

PRECAUTIONS

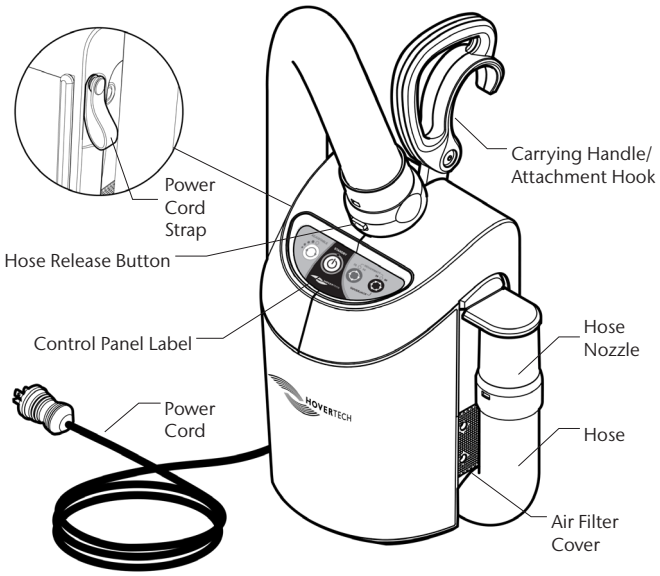
- Never leave patient unattended on an inflated device.
- Use this product only for its intended purpose as described in this manual. Only use attachments and/or accessories that are authorized by HoverTech.
- Use of this device with products or accessories not authorized by HoverTech could result in injury or equipment malfunction and may void the Manufacturer's Warranty. HoverTech will not be held responsible for any injuries or damages caused due to the improper use of this device.
- When using the air supply in the MRI environment, a 25-ft. specialty MRI hose is required (available for purchase).
- Avoid electric shock. Do not open air supply.
- Reference product specific user manuals for operating instructions.
- Warning: To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.
- Warning: The HT-Air is not compatible with DC power supplies.
- Warning: The HT-Air is not intended for use with the HoverJack Battery Cart.
- Route the power cord in a manner to ensure freedom from hazard.
- Avoid blocking the air intakes of the air supply.
- Not for use in the presence of flammable anesthetics or in a hyperbaric chamber or oxygen tent.

To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.

The HT-Air is not compatible with DC power supplies.

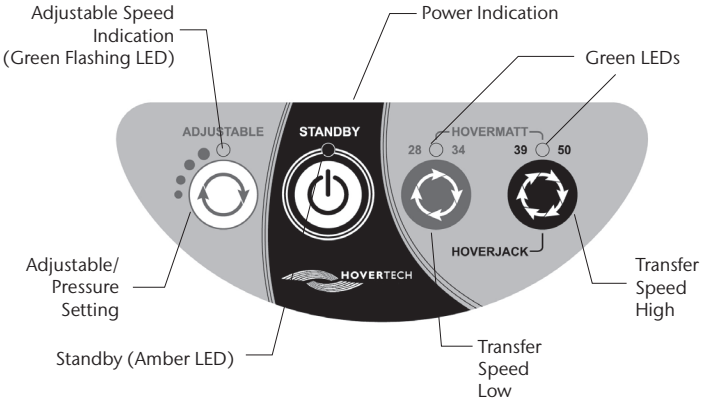
The HT-Air is not intended for use with the HoverJack Battery Cart.

Part Identification



CAUTION:
NO USER SERVICEABLE PARTS.
Only qualified service personnel shall perform repairs on the HoverTech Air Supply.

Air Supply Keypad Functions



ADJUSTABLE: For use with HoverTech air-assisted positioning devices. There are four different settings. Each press of the button increases the air pressure and rate of inflation. The Green Flashing LED will indicate the inflation speed by the number of flashes (i.e. two flashes equals the second inflation speed).

All of the settings in the ADJUSTABLE range are substantially lower than the HoverMatt and HoverJack settings. The ADJUSTABLE function is not to be used for transferring.

The ADJUSTABLE setting is a safety feature that can be used to ensure the patient is centered on HoverTech air-assisted devices and to gradually accustom a patient who is timid or in pain to both the sound and functionality of the inflated devices.

STANDBY: Used to stop inflation/air flow (Amber LED indicates STANDBY mode).

HOVERMATT 28/34: For use with 28" & 34" HoverMatts and HoverSlings.

HOVERMATT 39/50 & HOVERJACK: For use with 39" & 50" HoverMatts and HoverSlings and 32" & 39" HoverJacks.

Product Specifications

Dimensions:	31.75 x 17.8 x 17.8 cm (12.5 x 7 x 7 inches)
Weight:	5.67 kg (12.5 lbs)
Enclosure Material:	ABS rated UL94V-0/Stainless Steel
Power Cord Set Length:	VDE Certified 457 cm (15 feet)
Cord Type & Rating:	C13 90° Left, 10A, 250Vac
Service Life:	5 years
Power Input:	230Vac, 50 Hz, 6A (European version)

Model #: HTAIR2300 (European Version) – 230Vac, 50Hz, 6A

CLASSIFICATION

Type of protection against electric shock:	CLASS I EQUIPMENT
Degree of protection against electric shock:	TYPE BF APPLIED PART
Protection against ingress of water:	Ordinary (not protected).
Mode of operation:	CONTINUOUS OPERATION

To remove supply mains, unplug equipment from wall.

OPERATING CONDITIONS

Use Temperature:	10° to 40° C (50° to 104° F)
Use Humidity:	10% to 70% Non-Condensing
Use Altitude:	2,000m / 6,562ft
Maximum Operation Atmospheric Pressure Range:	700 to 1,060 hPa

STORAGE AND TRANSPORT CONDITIONS

Storage/Shipping Temperature:	-40° to 70° C (-40° to 158° F)
Storage/Shipping Humidity:	10% to 70% Non-Condensing

CIRCUIT BREAKER

Max Operating Voltage:	32Vdc; 250Vac, 50/60Hz
Current:	6A
Operating speed:	5 to 30 seconds
Size:	1.397 x 1.6129 cm)
Resettable Overload Capacity:	10x6=60(A)

Cleaning

Between patient use, clean and disinfect the surface of the air supply by wiping it down with EPA approved hospital-grade disinfectant wipes or disinfectant cleaner sprayed on a cleaning cloth. Follow disinfectant manufacturer's directions for dwell time and other instructions for use. Using the disinfectant wipes/spray cleaner may degrade the graphics on the control panel over time. Replacement panels can be purchased directly from HoverTech, if necessary.

NOTE: DO NOT SPRAY CLEANERS/LIQUIDS DIRECTLY ON THE AIR SUPPLY.

PREVENTIVE MAINTENANCE

Prior to use, a visual inspection should be performed on the air supply to ensure the power cord is not frayed or nicked and that there is no visual damage that would render the air supply unusable.

If any damage is found that would cause the air supply not to function as intended, the air supply should be removed from use and returned to HoverTech for repair.

The air supply has air filters on either side of the motor. These filters can be accessed by removing the small screws holding the filter covers in place. It is recommended that the air filter is assessed per your facility's preventive maintenance schedule or annually. Filter should be cleaned if clogged.

Remove the filter from the air supply and hold it under warm running water. Allow the air filters to dry prior to placing back in the air supply.

The filter should be replaced when it is clogged with debris that does not break free when it is washed. The filter should also be replaced if it begins to lose its shape or deteriorate.

NOTE: IF AIR SUPPLY NEEDS TO BE DISPOSED, CHECK YOUR LOCAL / STATE / FEDERAL / INTERNATIONAL GUIDELINES BEFORE DISPOSAL.

INFECTION CONTROL

When a HoverTech air supply is used in a patient room where isolation protocols are being observed, the hospital should employ the same protocols/procedures it utilizes for other equipment used in that patient room.

Between use with an airborne isolation patient, the air supply filters can be removed and disinfected or replaced if hospital protocol requires. If the air filters are disinfected, allow them to dry prior to placing back in the air supply.

An air hose cover is available. These covers are disposable and come in a box of 25 (Model #ASHC).

Electromagnetic Compatibility Chart

Guidance and manufacturer's declaration – electromagnetic emissions

The HTAIR2300 is intended for use in the electromagnetic environment specified below.

The customer or the user of the HTAIR2300 should assure that it is used in such an environment.

Emission test	Compliance	Electromagnetic environment-guidance
RF emissions CISPR 11	Group 1	The HTAIR2300 uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The HTAIR2300 is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations /flicker emissions IEC 61000-3-3	Compliance	

Guidance and manufacturer's declaration – electromagnetic immunity

The HTAIR2300 is intended for use in the electromagnetic environment specified below.

The customer or the user of the HTAIR2300 should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/ burst IEC 61000-4-4	± 2kV for power supply lines ± 1kV for input/output lines	± 2kV for power supply lines Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1kV line(s) to line(s) ± 2kV line(s) to earth	± 1kV differential mode Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	<5% UT(>95% dip in UT) for 0,5 cycle 40% UT(60% dip in UT) for 5 cycles 70% UT(30% dip in UT) for 25 cycles <5% UT(>95% dip in UT) for 5 s	Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50, 60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	The HTAIR2300 power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE: UT is the a.c. mains voltage prior to application of the test level.

Electromagnetic Compatibility Chart

Guidance and manufacturer's declaration – electromagnetic immunity

The HTAIR2300 is intended for use in the electromagnetic environment specified below.

The customer or the user of the HTAIR2300 should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 KHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the HTAIR2300 including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance: d = 1,2 √P d = 1,2 √P 80 MHz to 800 MHz d = 2,3 √P 800 MHz to 2,5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, a should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	

NOTE1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the HTAIR2300 is used exceeds the applicable RF compliance level above, the HTAIR2300 should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the HTAIR2300.

b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Electromagnetic Compatibility Chart

Recommended separation distance between portable and mobile RF communications equipment and the HTAIR2300

The HTAIR2300 is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the HTAIR2300 can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the HTAIR2300 as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz d =1,2√P	80 MHz to 800 MHz d =1,2√P	800 MHz to 2,5 GHz d =2,3√P
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance (d) in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where (p) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Returns and Repairs

All products being returned to HoverTech must have a Returned Goods Authorization (RGA) number issued by the company.
Please call (800) 471-2776 and ask for a member of the RGA Team who will issue you an RGA number. Any product returned without an RGA number will cause a delay in the repair time.

Returned products should be sent to:

HoverTech
Attn: RGA # _____
4482 Innovation Way
Allentown, PA 18109

For European companies, send returned products to:

Attn: RGA #_____
Kista Science Tower
SE-164 51 Kista, Sweden

For product warranties, visit our website:
https://hovermatt.com/standard-product-warranty/

HoverTech

4482 Innovation Way
Allentown, PA 18109

www.HoverMatt.com
Info@HoverMatt.com

These products comply with the standards applicable for Class 1 products in the Medical Device Regulation (EU) 2017/745 on medical devices.

EC REP

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3951DB MAARN, THE NETHERLANDS.

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UK REP

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+44 121 561 2222

www.etac.com/uk

CH REP

TapMed Swiss AG

Gumprechtstrasse 33
CH-6376 Emmetten
CHRN-AR-20003070

www.tapmed-swiss.ch

In case an adverse event in relation to the device, incidents should be reported to our authorized representative. Our authorized representative will forward information to the manufacturer.

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