






























Sprint / Stroller / Hi Flow Stroller



Symbols Glossary

ISO 7000; Graphical symbols for use on equipment—Index and synopsis	
	Storage or operating temperature range. Reg. # 0632
	Storage humidity range Reg. # 2620
	Atmospheric pressure limitation. Reg. # 2621
	Keep away from rain, keep dry. Reg. # 0626
	Name and address of manufacturer. Reg. # 3082
	Caution, consult accompanying documents. Reg. # 0434A
	Catalog Number. Reg. # 2493
	Serial Number. Reg. # 2498
	This way up. Reg. # 0623
	Fragile, handle with care. Reg. # 0621
	Stacking limit by number. Reg. # 2403
ISO 7010: Graphical symbols—Safety colors and safety signs—Registered safety signs	
	Frostbite may occur on contact with cold liquid or gaseous oxygen, or frosted parts. Warning low temperature. To warn of low temperature or freezing conditions. Reg. # W010
	The instruction manual must be read. Reg. # M002
	Keep away from open flame, fire, sparks. Open ignition source and smoking prohibited. Reg. # P003
	Do not smoke near unit or while operating unit. Reg. # P002
	Type BF applied part (degree of protection against electric shock). Reg. # 5333
	Warning. Reg. # W001
Council Directive 93/42/EEC; concerning medical devices	
	Authorized representative in the European Community

	If the product unique device identifier (UDI) label has the CE#### symbol on it, the device complies with the requirements of Directive 93/42/EEC concerning medical devices. The CE#### symbol indicates notified body number.
	This device complies with the requirements of Directive 2010/35/EU concerning medical devices. It bears the pi marking as shown.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road	
	Non-toxic gas.
	Hazard Oxidizing substances: fire intensifying risk.
	Refrigerated Liquid, USP; Produced by Air Liquefaction
Internal Symbols	
	Keep unit well ventilated at all times
	Keep away from flammable materials, oil and grease.
IEC 60417: Graphical Symbols for use on equipment	
	Do not cover unit. These units normally vent oxygen. No. 5641
21 CFR 801.15: Code of Federal Regulations Title 21	
RX ONLY	Federal law restricts this device to sale by or on the order of a physician.
Council Directive 2012/19/EU: waste electrical and electronic equipment (WEEE)	
	WEEE
IEC 60601-1: Medical electrical equipment Part 1 General requirements for basic safety and essential performance	
IP22	Drip Proof IP22

This product may be covered by one or more patents, US and international. Please visit our website below for the listing of applicable patents. Pat.: www.caireinc.com/corporate/patents/.

Specifications

- Mode of Operation: Continuous Flow
- Type of Protection Against Electrical Shock: Internally Powered Equipment
- Degree of Protection Against Electrical Shock: Type BF Applied Part
- Classification According to the Degree of Protection Against Ingress of Water: IP22 – Ordinary Equipment
- Equipment not suitable for use in the presence of flammable mixtures

Product Specifications			
	Sprint	Stroller	Hi Flow Stroller
LOX Capacity	1.5 lb (0,68 kg)	3.0 lb (1,36 kg)	3.0 lb (1,36 kg)
Gaseous Equivalent Capacity	513 L	1026 L	1025 L
Weight, Empty	4.5 lb (2,04 kg)	5.0 lb (2,27 kg)	5.5 lb (2,49 kg)
Weight, Filled	6.0 lb (2,72 kg)	8.0 lb (3,63 kg)	8.5 lb (3,86 kg)
Height	11.75 in. (298 mm)	13.5 in. (343 mm)	13.5 in. (343 mm)
Dimensions	4-7/8" (122 mm) D X 7.5" (191 mm) W	5-7/8" (149mm) D x 7.5" (191mm) W	5.875" (149 mm) D x 7.5" (191 mm) W
Typical use time at 2 LPM	4.3 hours	8.5 hours	8.5 hours
Operating Pressure	20 psi (137 kPa)	20 psi (137 kPa)	20 psi (137 kPa)
Normal Evaporation Rate	1.3 lb/ day (0,57 kg/ day)	1.3 lb/ day (0,57 kg/ day)	1.3 lb/ day (0,57 kg/ day)
Standard Flow Control Range	off, .25, .5, .75, 1, 1.5, 2, 2.5, 3, 4, 5, 6 LPM	off, .25, .5, .75, 1, 1.5, 2, 2.5, 3, 4, 5, 6 LPM	Off, .5, 1, 2, 2.5, 3, 4, 6, 8, 10, 12, 15 LPM
Flow Rate Accuracy*	+/- 10%	+/- 10%	+/- 10%

* This accuracy is only at 70F and 14.7 psig and with a calibrated accurate mass flow meter.

Warning Information

Important: Read this manual thoroughly before operating the Sprint/Stroller/Hi Flow Stroller.
RX Only.

 **WARNING: THIS DEVICE IS NOT INTENDED FOR LIFE SUSTAINING USE.**

WARNING: IF YOU FEEL THE EQUIPMENT IS NOT OPERATING PROPERLY, CALL YOUR HEALTH CARE PROVIDER. DO NOT ATTEMPT TO REPAIR OR ADJUST THE UNIT YOURSELF.

WARNING: DO NOT MODIFY THIS EQUIPMENT WITHOUT AUTHORIZATION FROM THE MANUFACTURER.

WARNING: IF CONTINUITY OF OXYGEN SUPPLY IS REQUIRED, ENSURE THAT AN ADEQUATE SUPPLY OF OXYGEN AND/OR A SECONDARY OXYGEN SUPPLY IS AVAILABLE AT ALL TIMES DURING THERAPY.


WARNING: DO NOT ALLOW SMOKING, CANDLES, OR OPEN FLAMES WITHIN 10 FEET (3 METERS) OF THE DEVICE, OR CLOSER THAN 8 INCHES (20 CM) FROM ANY SOURCE OF IGNITION.

WARNING: KEEP YOUR UNIT IN A WELL-VENTILATED AREA.

WARNING: DO NOT STORE LIQUID OXYGEN EQUIPMENT IN A CLOSET, CAR TRUNK, OR OTHER CONFINED AREA. DO NOT PLACE BLANKETS, DRAPERIES, OR OTHER FABRICS OVER EQUIPMENT.

WARNING: THIS PRODUCT CAN EXPOSE YOU TO CHEMICALS INCLUDING NICKEL, WHICH IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER. FOR MORE INFORMATION, GO TO WWW.P65WARNINGS.CA.GOV.

WARNING: IN THE EVENT THERE IS A SERIOUS INCIDENT OCCURRING WITH THIS DEVICE, THE USER SHOULD IMMEDIATELY REPORT THE INCIDENT TO THE PROVIDER AND/OR THE MANUFACTURER. A SERIOUS INCIDENT IS DEFINED AS AN INJURY, DEATH, OR POTENTIAL TO CAUSE INJURY/DEATH SHOULD THERE BE A REOCCURRENCE OF THE INCIDENT. THE USER CAN ALSO REPORT THE INCIDENT TO THE COMPETENT AUTHORITY IN THE COUNTRY WHERE THE INCIDENT OCCURRED.

 **Caution: Use the Sprint/Stroller/Hi Flow Stroller only as directed by your doctor.**

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

Caution: The unit contains liquid oxygen which is extremely cold, almost -300°F (-184°C). Exposure to such a low temperature can cause severe frostbite.

Caution: Liquid and gaseous oxygen, though non-flammable, cause other materials to burn faster than normal. This hazard, along with the low temperature of liquid oxygen, warrants certain safety precautions.

Caution: Keep flammable materials away from this equipment. Aerosol sprays, oils and grease, including facial creams and petroleum jelly, ignite easily and may burn rapidly in the presence of oxygen.

Caution: Smoking while wearing an oxygen cannula can cause facial burns and possibly result in death.

Removing the cannula and placing it on clothing, bedding, sofas, or other cushion material will cause a flash fire when exposed to a cigarette, heat source, spark or flame.

If you smoke please: (1) turn off the portable, (2) take off the cannula, and (3) leave the room where the device is located.

Caution: In the event of an accidental tip-over, immediately but cautiously return the unit into an upright position if possible. If any liquid oxygen is escaping, leave the area immediately and call your healthcare provider. Do not attempt to move the unit or stop the liquid oxygen from escaping.

NOTE: Do not touch frosted parts of any unit.

NOTE: Do not store or operate the portable coupled to the stationary unit.

NOTE: Do not allow untrained personnel to handle or operate this device.

NOTE: Use of this device is prohibited on commercial passenger and cargo air flights by the Federal Aviation Administration.

Intended Use

The CAIRE Sprint/Stroller/Hi Flow Stroller oxygen unit is intended for the administration of supplemental oxygen. The device is not intended for life support nor does it provide any patient monitoring capabilities.

Introduction

The Sprint, Stroller, and Hi Flow Stroller are intended for the administration of supplemental oxygen to the patient in the end user's home and can also be used in institutions such as nursing homes or sub-acute care facilities. The Sprint/Stroller/Hi Flow Stroller provide an ambulatory source of oxygen for an extended period of time.

The device is used by COPD patients or those with diminished breathing capacity. The device is prescribed to the patient. The device is sold to a provider that is trained to operate and service the Sprint/Stroller/Hi Flow Stroller. The provider trains the user.

The device is not intended for life support nor does it provide any patient monitoring capabilities. It is recommended to have an alternate source of supplemental oxygen in the event of mechanical failure. These portable devices also have a quick disconnect valve that can be coupled with a reservoir lox device for transfilling the portable device. The reservoir unit is filled by your health care provider.

This user manual contains the instructions for using the Sprint/Stroller/Hi Flow Stroller. Refer to the user manual supplied with the stationary unit for its operation.

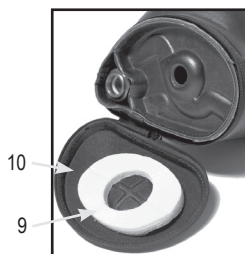
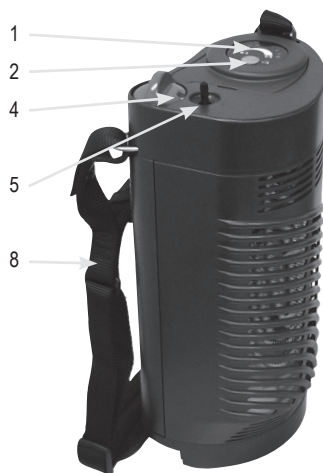
NOTE: The service provider will assist with the initial setup and instruct proper handling and usage of the unit.



Sprint, Stroller and Hi Flow Stroller units

Controls








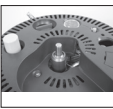


1. Electronic Liquid Level Gauge
2. Electronic Liquid Level Switch
3. Mechanical Liquid Level Gauge
4. Flow Control Knob
5. Oxygen Tube Connector
6. Vent Valve
7. Fill Connections (see next page for QDV Identification)
8. Carrying Strap with Shoulder Pad
9. Condensation Pad
10. Condensation Cup



Sprint / Stroller / Hi Flow Stroller

Quick Disconnect Valve (QDV)

Identification

Portable Connector	Stationary Connector	QDV Style	
		CAIRE Side Fill	SF Locking
		LIFE-OX	TF Locking
		PENOX	
		TAEMA	TF Push-On
		PB	

3. Position the fill connector in the upright position over the stationary unit's connector.



4. a. If your connector is a push-on:
Lower the Sprint/Stroller/Hi Flow Stroller unit on to the stationary until you feel the connector engage.



- b. If the connector is a Penox or Life-Ox:
Rotate Sprint/Stroller/Hi Flow Stroller until you feel the connector engage. Then, carefully and firmly, rotate the Sprint/Stroller/Hi Flow Stroller clockwise (↻) while pressing downward.



NOTE: Continued on step 6 in To Fill the Side Fill Sprint/Stroller/Hi Flow Stroller.

Operating Instructions

To Fill the Top Fill Sprint/Stroller/Hi Flow Stroller

1. Clean the fill connectors on both the stationary and the Stroller/Sprint/Hi Flow Stroller with a clean, dry, lint-free cloth.



Caution: The fill connectors must be dry, because moisture can cause your Sprint/Stroller/Hi Flow Stroller and stationary unit to freeze together.

2. Make sure the flow control knobs on both the Sprint/Stroller/Hi Flow Stroller and reservoir are in the off (0) position.

To Fill the Side Fill Sprint/Stroller/Hi Flow Stroller

1. Clean the fill connectors on both the stationary and the Sprint/Stroller/Hi Flow Stroller with a clean, dry, lint-free cloth.



WARNING: THE FILL CONNECTORS MUST BE DRY, BECAUSE MOISTURE CAN CAUSE YOUR SPRINT/STROLLER/Hi FLOW STROLLER AND STATIONARY UNIT TO FREEZE TOGETHER.

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2. Make sure the flow control knobs on both the Sprint/Stroller/Hi Flow Stroller and reservoir are in the off (0) position
3. Make the Sprint/Stroller/Hi Flow Stroller fill connector is in the upright position to the stationary connector.



4. Rotate the Sprint/Stroller/Hi Flow Stroller counterclockwise (↺) until you feel the pin and slot engage.



5. Carefully and firmly rotate the Sprint/Stroller/Hi Flow Stroller back to the upright position. Now the units are locked together.



NOTE: Continued on step 6.

NOTE: For push-on style connector, hold the unit in place throughout the fill.

6. Open the vent valve to begin filling your Sprint/Stroller/Hi Flow Stroller. You should hear some oxygen escaping; do not worry. The hissing sound

you hear is perfectly normal.

NOTE: Liquid level gauge readings are most accurate 30 seconds or more after the Sprint/Stroller/Hi Flow Stroller is filled.



7. You may also see vapor around the connection. This is normal and is due to the great difference in temperature between the liquid oxygen and the warm air surrounding the units.
8. When the unit is full, close the vent valve. You can tell that the unit is full when the hissing sound changes in tone, and some liquid comes out of the vent line.

NOTE: Closing the valve after a nearly continuous stream of liquid is discharging fills the Sprint/Stroller/Hi Flow Stroller most completely, but wastes some liquid oxygen.

NOTE: Closing the valve at the first sign of liquid discharge does not fill the Sprint/Stroller/Hi Flow Stroller as completely, but saves liquid oxygen.

9. For the push-on style connectors, push the release button down until the units separate. For all other connectors rotate the unit until it separates from the stationary unit.



Portable Release Button (push-on style only)

Sprint / Stroller / Hi Flow Stroller



Caution: Check liquid level gauge only after the valve is closed.

Caution: If the Sprint/Stroller/Hi Flow Stroller is being refilled immediately after a period of use, fill it, and then wait 10 minutes after filling with the FCV set at zero for the pressure to stabilize. Then operate as normal.



WARNING: DO NOT OPERATE SPRINT/STROLLER/HI FLOW STROLLER WHILE ATTACHED TO THE STATIONARY UNIT.

WARNING: IF THE SPRINT/STROLLER/HI FLOW STROLLER DOES NOT SEPARATE EASILY, DO NOT USE FORCE. THE UNITS MAY BE FROZEN TOGETHER. LEAVE THE UNITS CONNECTED AND WAIT UNTIL THE UNITS WARM UP — THEN THEY WILL SEPARATE EASILY. DO NOT TOUCH ANY FROSTED PARTS. **WARNING:** SHOULD THE LEAKAGE BE EXCESSIVE TO THE POINT THAT A STREAM OF LIQUID IS PRESENT, LEAVE THE AREA AND CALL YOUR HEALTH CARE PROVIDER IMMEDIATELY.

WARNING: LIQUID OR COLD GASEOUS OXYGEN CAN FROSTBITE THE SKIN. OXYGEN WILL RESULT IN INCREASED FIRE HAZARD.



Caution: Should there be any liquid leakage from the stationary unit or Sprint/Stroller/Hi Flow Stroller separating the units, set the Sprint/Stroller/Hi Flow Stroller aside, ensuring it remains vertical, leave the room, and call your health care provider immediately.

Note: To Equipment Provider: The following oxygen administration accessories are recommended for use with the Sprint / Stroller / Hi Flow Stroller:

- Nasal Cannula: CAIRE Part Number 5408-SEQ
- Firebreak: CAIRE Part Number 21126636

A firebreak is recommended for use with any cannula.

• CAIRE offers a firebreak intended to be used in conjunction with the oxygen portable. The firebreak is a thermal fuse to stop the flow of gas in the event that the downstream cannula or oxygen tubing is ignited and burns to the firebreak. It is placed in-line with the nasal cannula or oxygen tubing between the patient and the oxygen outlet of the Sprint / Stroller / Hi Flow Stroller. For proper use of the firebreak, always refer to the manufacturer's instructions (included with each firebreak kit).

• Additional recommended accessories information is available online at www.caireinc.com.

Operating Instructions



(Cannula is not included.)

1. Push the cannula breathing tube firmly on to the oxygen tube connector.
2. Adjust your cannula breathing tube to the proper position so that you will be able to breathe the oxygen comfortably.
3. Turn the flow control knob on top of the Sprint/Stroller/Hi Flow Stroller clockwise until the prescribed flow rate (numeral) is visible in the knob "window" and a positive detent is felt.



Caution: Out-of-specification oxygen flow will result if the flow control knob is set between flow rates.

4. You should be receiving oxygen now. To stop flow of oxygen, turn the flow control knob counterclockwise to the off (0) position.



Caution: Always turn the flow control knob off (0) when not in use.



5. Use the following chart as a guideline to determine the length of time the Sprint/Stroller/Hi Flow Stroller will operate:

FCV Setting			
Model	Sprint	Stroller	Hi Flow Stroller
	Nominal	Nominal	
FCV Pos.	Sprint	Stroller	Hi Flow Stroller
Off	30:00	60:00	71:00
0.25	18:00	30:00	NA
0.5	12:12	23:00	32:00
0.75	9:18	17:24	NA
1	7:30	14:06	16:00
1.5	5:30	10:12	NA
2	4:18	8:00	8:00
2.5	3:36	6:36	6:20
3	3:06	5:36	5:20
4	2:24	4:24	4:00
5	2:00	3:36	NA
6	1:42	3:00	2:40
8	N/A	N/A	2:00
10	N/A	N/A	1:40
12	N/A	N/A	1:20
15	N/A	N/A	1:00

Note: Times are in hours and minutes (format 00:00).

Note: The “Nominal” times are for ideal conditions, i.e. maximum fill, exact flow rates, good loss rate, unit not being moved, etc.

These times are the maximum expected.

Note: Your individual results will vary.

- 6a. To verify the level of liquid oxygen in the unit with the electronic liquid level gauge:

- **Gen 3 Gauge:** Depress the push button (liquid level switch) on top of the unit for two seconds minimum. Read across the top of the light bar to indicate contents level.



- **Gen 4 Gauge:** Press the green operate button on the face of the gauge. Read the arc of LEDs, which indicates content level.



Caution: The Sprint/Stroller/Hi Flow Stroller is empty if only the last segment of the light bar is lit.

If the Low Battery indicator lights up when the button is depressed, notify your health care provider.

NOTE: The Sprint/Stroller/Hi Flow Stroller will continue to supply oxygen even if the Low Battery Indicator lights up, as long as there is liquid oxygen in the unit.

- 6b. To verify the level of liquid oxygen in unit with the mechanical liquid level gauge:

- Support the unit, by the fabric strap, directly above the black contents indicator spring scale chamber.
- Allow the unit to stabilize (i.e. not bounce up and down), then read the exposed colored scale for approximate liquid oxygen contents.



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NOTE: If the unit is empty, only the red colored band of the scale will be exposed. If this is the case, the unit must be filled prior to use.

7. Under certain environmental conditions, with continuous use, and especially with the portable not being moved, it may develop excessive frost around the vaporizer coil and on the case. You may reduce this frost by tapping the unit and/or wiping any accumulated frost off the case.

Condensate Pad Maintenance

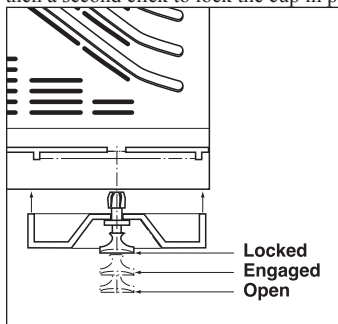
After the unit is empty and has warmed up to room temperature, remove any moisture from the condensation cup:

For hard case

- Tilt the unit to one side. Grasp the knob at the center of the condensation cup (at the bottom of the unit) and pull straight out. This will release the cup.

NOTE: If heavily soiled, the pad can be machine washed (with bleach to disinfect).

- To replace the cup, center it over the round opening at the bottom of the unit and press the knob in one click to engage the cup and then a second click to lock the cup in place.



Knob Cup



NOTE: If the knob will not push in and engage the cup, hold the cup and pull the knob out until it clicks into the open position. Now replace the cup as previously described.

For soft case

- Unzip the bottom zipper and pull back the bottom cover.

- Remove the pad from the cup and wring out any absorbed moisture. Allow the pad to dry completely before replacing it in the cup.

NOTE: If heavily soiled, the pad can be machine washed (with bleach to disinfect).

- To replace, simply insert pad into bottom cover and rezip the bottom zipper.

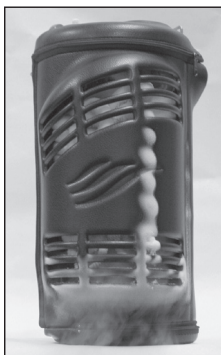
NOTE: If the knob will not push in and engage the cup, hold the cup and pull the knob out until it clicks into the open position. Now replace the cup as previously described.

Frost Reduction

Under certain environmental conditions, with continuous use, and especially with the portable not being moved, it may develop excessive frost around the vaporizer coil and on the case. You may reduce this frost by tapping the unit and/or wiping any accumulated frost off the case.



WARNING: DUE TO THE POSSIBILITY OF EXCESSIVE MOISTURE / ICE BUILD UP IT IS RECOMMENDED THAT THE HI FLOW STROLLER REMAIN IDLE FOR 1 HOUR AFTER USE TO DECREASE MOISTURE BUILDUP.



Due to the higher flow rates associated with the Hi Flow Stroller, condensation and some frosting will occur on the unit, particularly on flow settings of 10 LPM and higher. It is recommended that the unit be allowed at least 1 hour of inactivity after use to decrease the possibility of excessive build up due to continuous usage.

Troubleshooting

The following information is intended to help you troubleshoot and solve simple operational problems that you may experience when using your Sprint/Stroller/Hi Flow Stroller.

Issue	Solution
The Portable makes a hissing sound.	<ul style="list-style-type: none"> Hissing can occur to maintain the correct operating pressure within the Portable. It is most likely to hiss after filling or when the position of the Portable is changed. Hissing can last for approximately 10 minutes after filling. Additionally, it can occur when the flow control valve is at a low setting. If the portable has been laid in an improper position return the portable to an upright position and allow several minutes for the unit to stabilize
The Portable flow stops during use.	<ul style="list-style-type: none"> Ensure that the cannula is firmly attached to the Oxygen Outlet. Ensure that the cannula is not kinked. Check the contents indicator/level gauge and fill the portable if needed. Ensure the flow control knob is not in the off ("0") position.
The Portable does not fill.	<ul style="list-style-type: none"> Verify that there is oxygen in the Reservoir. Ensure that the Portable and Reservoir fill connectors are fully engaged throughout the filling process.
The Portable vent valve does not close properly at the end of the filling process.	<ul style="list-style-type: none"> If the vent valve fails to close and the hissing sound and oxygen vapor cloud continue, carefully remove the Portable by depressing the release button on the Reservoir. Venting from the bottom of the Portable will stop in a few minutes. Allow the unit to warm until you can close the vent valve. The Portable may require as much as 60 minutes to restore adequate pressure for accurate oxygen flow. If needed, use an alternate source of oxygen such as a flow control valve attached to the Reservoir.
The Portable does not disengage easily from the Reservoir after filling.	<ul style="list-style-type: none"> The Portable and Reservoir fill connectors may have become frozen. DO NOT USE FORCE. Allow a few minutes for the frozen parts to warm, then disengage the Portable when the ice has melted. To prevent the units from freezing together, always wipe the male fill connector on the Reservoir and the female fill connector on the Portable with a clean, dry cloth before filling.

Cleaning Standard



WARNING: CLEAN ONLY AFTER THE UNIT IS EMPTY.

- Clean using a solution of mild dish washing detergent and water.
- Apply cleaning solution directly to a lint-free cloth. Approved cleaners include HydroPure and HydroKlean. Do not spray cleaners directly on the Sprint/Stroller/Hi Flow Stroller.
- Wipe the outside surface with the lint-free cloth until the outside surface is clean.



Caution: Do not use high temperature and high pressure washing equipment to clean these units.

- Do not get cleaner on any internal components or valves.
- Allow the unit to dry thoroughly before using.

Note: Note to health care provider – for reprocessing procedures, see applicable service manual.

Maintenance

Your service provider is responsible for any maintenance that may be required per the technical manual of this device. Call your service provider for any maintenance requirements.

The condensate pad is the only user-serviceable part. No other parts are user-serviceable.

The expected service life is a minimum of five years.

Clean the fill connectors on both the stationary and portable units with a clean, dry, lint-free cloth between each fill to prevent freezing and possible equipment failure.

Note: Any additional maintenance needed must be done by a qualified service technician or service provider.

WEEE and RoHS



This symbol is to remind the equipment owners to return it to a recycling facility at the end of its life, per Waste Electrical and Electronic Equipment (WEEE) Directive.

Our products will comply with the restriction of Hazardous Substances (RoHS) directive. They will not contain more than trace amounts of lead or other hazardous material content.

Disposal

Always return Sprint/Stroller/Hi Flow Stroller, including all components, to your homecare provider for proper disposal. You can also contact your local city or town offices for instructions on proper disposal of the battery.

Transport and Storage

The device should be stored in the upright position, and be well ventilated. Do not allow the device to lie on its side. Humidity up to 95% noncondensing. Temperatures range from -40°F to 158°F (-40°C to 70°C).

Operating temperature ranges from 14°F to 104°F (-10°C to 40°C). Relative humidity range from 30% to 75% noncondensing.

Note: The atmospheric pressure range is 700 hPa to 1060 hPa (elevation of 10,000 Ft. to -1,000 Ft.).

Accessories



Carrying Cart PN 20765565

Safety



WARNING: PORTABLE RF COMMUNICATIONS EQUIPMENT (INCLUDING PERIPHERALS SUCH AS ANTENNA CABLES AND EXTERNAL ANTENNAS) SHOULD BE USED NO CLOSER THAN 30 CM (12 INCHES) TO ANY PART OF THE SPRINT/STROLLER/HI FLOW STROLLER, INCLUDING CABLES SPECIFIED BY THE MANUFACTURER. OTHERWISE, DEGRADATION OF THE PERFORMANCE OF THIS EQUIPMENT COULD RESULT.

WARNING: USE OF ACCESSORIES, TRANSDUCERS AND CABLES OTHER THAN THOSE SPECIFIED OR PROVIDED BY THE MANUFACTURER OF THIS EQUIPMENT COULD RESULT IN INCREASED ELECTROMAGNETIC EMISSIONS OR DECREASED ELECTROMAGNETIC IMMUNITY OF THIS EQUIPMENT AND RESULT IN IMPROPER OPERATION.

WARNING: USE OF THIS EQUIPMENT ADJACENT TO OR STACKED WITH OTHER EQUIPMENT SHOULD BE AVOIDED BECAUSE IT COULD RESULT IN IMPROPER OPERATION. IF SUCH USE IS NECESSARY, THIS EQUIPMENT AND THE OTHER EQUIPMENT SHOULD BE OBSERVED TO VERIFY THAT THEY ARE OPERATING NORMALLY.



Caution: Medical Electrical Equipment needs special precautions regarding Electromagnetic compatibility (EMC) and needs to be installed and put into service according to the EMC information provided in this manual.

Caution: Portable and mobile radio frequency (RF) communications equipment can affect Medical Electrical Equipment.

Table 1

Guidance and Manufacturer's declaration—electromagnetic emissions

The Sprint/Stroller/Hi Flow Stroller is intended for use in the electromagnetic environment specified below. The customer or the user of the Sprint/Stroller/Hi Flow Stroller should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment—guidance
RF emissions CISPR 11	Group 1	The Sprint/Stroller/Hi Flow Stroller uses RF energy only for 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 Harmonic emissions IEC 61000-3-2 Voltage fluctuations/ flicker emissions IEC 61000-3-3	Class B Not applicable Not applicable	The Sprint/Stroller/Hi Flow Stroller 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.

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Table 2*

Recommended separation distances between portable and mobile RF communications equipment and the Sprint/Stroller/Hi Flow Stroller

The Sprint/Stroller/Hi Flow Stroller is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Sprint/Stroller/Hi Flow Stroller can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Sprint/Stroller/Hi Flow Stroller 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 and 800 MHz d=1.2 √P	800 MHz to 2,5 GHz d=2.3 √P
0,01	0.12 m	0.12 m	0.23 m
0,1	0.38 m	0.38 m	0.73 m
1	1.2 m	1.2 m	2.3 m
10	3.8 m	3.8 m	7.3 m
100	12 m	12 m	23 m

For transmitters rated at a maximum output power not listed above, the recommended separation distance (d) in meters (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.

NOTE 1 at 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

* This table is included as a standard requirement for equipment which has been tested to specific test levels and over specific frequency ranges and been found compliant with regulations.

Table 3

Guidance and manufacturers declaration—electromagnetic immunity

The Sprint/Stroller/Hi Flow Stroller is intended for use in the electromagnetic environment specified below. The customer or the user of the Sprint/Stroller/Hi Flow Stroller 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	+/- 8kV Contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 kV air	+/- 8kV Contact +/- 2 kV, +/- 4 kV, +/- 8 kV, +/- 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are synthetic, the relative humidity should be at least 30%. **
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	Not applicable DC powered device Not applicable No data input/output lines	Not applicable
Surge IEC 61000-4-5	±1 kV line(s) to line(s) ±2 kV line(s) to earth	Not Applicable DC powered device	Not Applicable
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 sec	Not Applicable DC powered device	Not Applicable
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m 50/60 Hz	30 A/m 50/60 Hz	Power frequency magnetic fields should be that of a typical commercial or hospital environment.

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

** This statement indicates that the required testing was performed in a controlled environment and the Sprint/Stroller/Hi Flow Stroller are found to be compliant with regulations.

Table 4

Guidance and Manufacturer's Declaration—Immunity ME Equipment and ME Systems

Guidance and Manufacturer's Declaration—Immunity			
The Sprint/Stroller/Hi Flow Stroller is intended for use in the electromagnetic environment specified below. The customer or user of the Sprint/Stroller/Hi Flow Stroller should ensure 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 6 Vrms (In ISM Bands) 150 kHz to 80 MHz	Not applicable Battery powered device, No SIP/SOP	Portable and mobile RF communications equipment should be used no closer to any part of the Sprint/Stroller/Hi Flow Stroller, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1,2 \sqrt{P}$
Radiated RF IEC 61000-4-3	80 MHz to 2.7 GHz	10 V/m 80 MHz—2,7 GHz 80 % AM at 1 kHz	$d = 1,2 \sqrt{P}$ $d = 2,3 \sqrt{P}$ 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 meters (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: 

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	Maximum power (W)	Distance (m)	Immunity Test Level (V/m)
385	380–390	TETRA 400	Pulse modulation ^{b)} 18 Hz	1.8	0.3	27
450	430–470	GMRS 460, FRS 460	FM ^{c)} ±5 kHz deviation 1 kHz sine	2	0.3	28
710	704–787	LTE Band 13, 17	Pulse modulation ^{b)} 217 Hz	0.2	0.3	9
745						
780						
810	800–960	GSM 800/900, TETRA 800, IDEN 820, CDMA 850, LTE Band 5	Pulse modulation ^{b)} 18 Hz	2	0.3	28
870						
930						
1720	1700–1900	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation ^{b)} 217 Hz	2	0.3	28
1845						
1970						
2450	2400–2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation ^{b)} 217 Hz	2	0.3	28
5240	5100–5800	WLAN 802.11 a/n	Pulse modulation ^{b)} 217 Hz	0.2	0.3	9
5500						
5785						

NOTE: If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the Sprint/Stroller/Hi Flow Stroller may be reduced to 1m. The 1m test distance is permitted by IEC 61000-4-3.

^{a)} For some services, only the uplink frequencies are included.

^{b)} The carrier shall be modulated using a 50% duty cycle square wave signal.

^{c)} As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.



www.caireinc.com



CAIRE Inc.
2200 Airport Industrial Dr., Ste. 500
Ball Ground, GA 30107 U.S.A.



Medical Product Service GmbH
Borngasse 20
35619 Braunfels, Germany
E-mail: info@mps-gmbh.eu
Worldwide: www.caireinc.com

Medstar Importacao Exportacao Ltda
Rua Valencio Soares Rodrigues, 89, Sala 01 Centro
Vargem Grande Paulista/SP
Brasil
06730-00
Tel/Fax: (55)(11)5535-0989
email: medstar@medstar.com.br

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