

Spring 2017 Med Tips

Product Information

HELIOS™ Plus and Marathon Quick Connect CPC Fitting

HELIOS portable LOX units manufactured after January 2014 do not have the quick connect CPC fitting installed. This fitting was previously used for connecting HELIOS portable units directly to HELIOS reservoirs. This allowed the conserver valve on the portable unit to be utilized while using oxygen from the reservoir. The connector has now been replaced with a blank plug (PN 10002647). CAIRE does offer a connector upgrade kit (PN 20748595) that allows installation of the CPC connector on newer units. The CPC connector itself (PN B-701586-00) can be replaced on older HELIOS portable units without purchasing the entire kit. The CPC Quick Connector Kit, when paired with the Quick Connect Coupling Insert (PN B-701686-00), can be temporarily installed on newer units to aid in pressurized testing during routine maintenance and troubleshooting. These procedures are described in the HELIOS Portables Technical Service Manual.

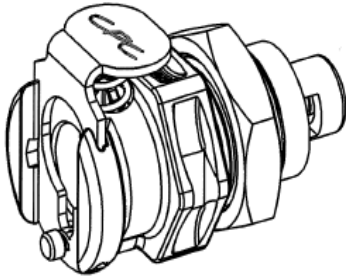


Figure 1: CPC Connector (PN B-701586-00)

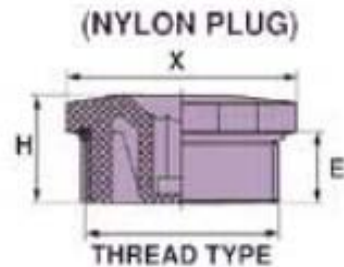


Figure 2: Blank Plug (PN 10002647)

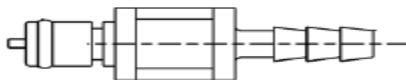


Figure 3: Quick Connect Coupling Insert (PN B-701686-00)

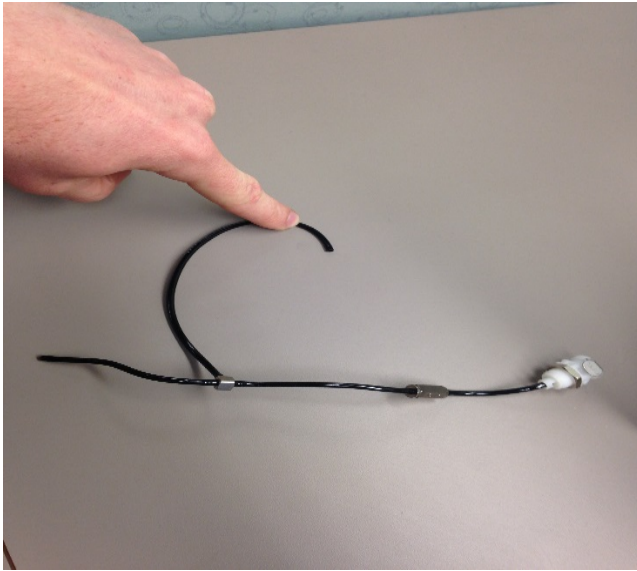


Figure 4: CPC Connector Kit (PN 20748595)



Figure 5: CPC Fitting Configuration Pre Jan 2014

Helpful Hints and FAQs

Eclipse® Battery Capacity Test

The below procedure should be used to test the full capacity of the Eclipse power cartridge:

1. Install the power cartridge in the Eclipse and remove any AC or DC power cords.
2. Turn the Eclipse on and let it run on a continuous flow setting.
3. Allow the Eclipse to run until the unit completely shuts down. Do not turn the Eclipse off when it begins to alarm for a low battery. Let it continue to run until the battery is completely drained and the unit shuts off.
4. Remove the power cartridge (battery) from the Eclipse and allow it to cool for approximately 2 hours.
5. Fully recharge the battery using either an Eclipse connected to AC power or a desktop charger.
6. Install the fully charged power cartridge into an Eclipse and remove any external power cords.
7. Turn the Eclipse on and let it run at the desired continuous (LPM) flow rate for testing.
8. Using a stopwatch or timer, record the time it takes for the Eclipse to completely shut down.
9. Take this time recorded in Step 8 and compare it to the full capacity operating time of a new power cartridge in the table below. If this time is less than 80% of the full capacity of a new power cartridge, it is recommended that the battery be taken out of service.

CONTINUOUS FLOW SETTING	NEW BATTERY FULL CAPACITY OPERATING TIME	MINIMUM OPERATING TIME (80% OF NEW BATTERY)
0.5 LPM	4.4 HOURS (4:24)	3.5 HOURS (3:30)
1.0 LPM	3.7 HOURS (3:42)	3.0 HOURS (3:00)
2.0 LPM	2.0 HOURS (2:00)	1.6 HOURS (1:36)
3.0 LPM	1.3 HOURS (1:18)	1.0 HOURS (1:00)

Liquid Oxygen Portable Carrying Cases

Carrying cases are available for all CAIRE liquid oxygen portables. Please use the table below as a guideline for ordering the carrying accessory that is compatible with each model.

Portable	Carrying Accessory	Part Number
Companion® C500 & C550	Hip Pack	#B-701654-00
Companion® C1000 & C1000T	Back Pack	#10018138
HELiOS™ H300	Hip Pack	#B-701654-00
HELiOS™ H850	Back Pack	#069209
Spirit 300	Hip Pack	#11843361
Spirit 600 & 1200	Back Pack	#13214825
Sprint™/Stroller®/Hi-Flow	Back Pack	#13214825

Companion® 1000 and Companion® 1000T

Effective 01/01/2017, the part number for the flow control valve on all Companion portable units will change. The current part number will change back to the original part number to make it easier for documentation and traceability purposes. The functionally and physical appearance of the flow control valve will remain the same. Below Figure 1 and Figure 2 illustrate the change in part numbers, while the flow control valves for the C1000 and C1000T remain the same. The new flow control valve kit is also a direct replacement for any older units.



Previous C1000 FCV (B-775859-FLO)



New C1000 FCV (B-775859-00)

(Flow Control Valve Part number Change C1000)



Previous C1000T FCV (B-775889-FLO)



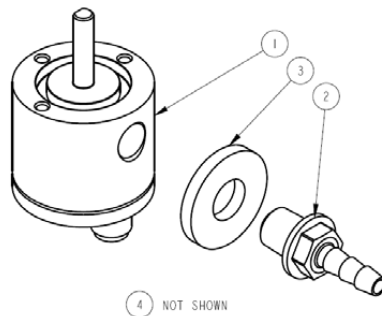
New C1000T FCV (B-775889-00)

(Flow Control Valve Part)

If the previous style of flow control valves manufactured before 7/15/2012 are being replaced with the new style, the part numbers shown in Table 1 are required. The newer valves have a smaller diameter, requiring the spacer and the longer outlet barb in order to fit properly. The kit is shown in Figure 3. However, if the unit has the newer style flow control valve kit installed, just the flow control valve can be ordered as a replacement using the part numbers in Figures 1 and 2.

Model	Flow Control Valve Being Replaced	Flow Control Valve PN Needed
C1000	B-775859-00 (prior to 7/15/12)	20592889
C1000T	B-775889-00 (prior to 7/15/12)	20592890
C1000	B-775859-00 (after to 7/15/12)	B-775859-00
C1000T	B-775889-00 (after to 7/15/12)	B-775889-00
C1000	B-775859-FLO	B-775859-00
C1000T	B-775889-FLO	B-775889-00

(Flow Control Valve Kit Part Numbers)

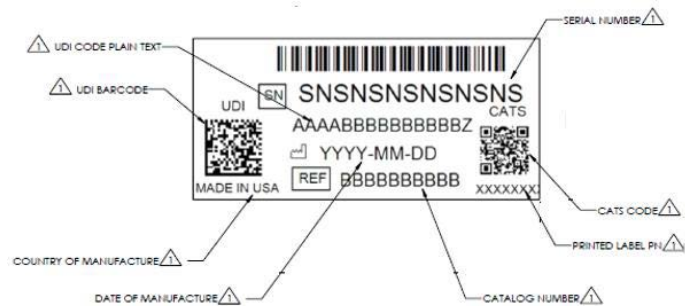


(Flow Control Valve Kit Diagram)

CAIRE Liquid Oxygen Reservoirs and Portables

Effective 8/29/2016, all CAIRE liquid oxygen reservoirs and portables will be manufactured with a Unique Device Indicator (UDI) label. The UDI is a code that is displayed in both human readable (plain text) and machine readable (AIDC) formats. The UDI will be made up of two parts, the Device Identifier and Product Identifier.

- o Device Identifier
 - Company
 - Model number
- o Product Identifier
 - Serial number
 - Manufacture Date



Please note the “CATS CODE” QR barcode will provide customers with easy access to the CAIRE website by scanning it.



FIGURE #1:
EXAMPLE UDI LABEL ON HELIOS 300



FIGURE #2:
EXAMPLE UDI LABEL ON HELIOS RESERVOIRS

Here are a list of the new UDI case part numbers:

Item Number	Description	Item Number	Description
21015140	CASE ASSY SPIRIT 600 G3.5 UDI	21015158	CASE ASSY STR G4 SF M BLK UDI
21015141	CASE ASSY SPIRIT 300 G4 UDI	21015159	CASE ASSY STR G4 TF M BLK UDI
21015142	CASE ASSY SPIRIT 300 G4 SF UDI	21015160	CASE ASSY STR G4 SF M GRY UDI
21015143	CASE ASSY SPIRIT 1200 G4 UDI	21015161	CASE ASSY STR G4 SF M BLK UDI
21015144	CASE ASSY STR G4 SF M GRY UDI	21015162	CASE ASSY STR G4 TF M GRY UDI
21015145	CASE ASSY STR G4 TF S GRY UDI	21015163	CASE ASSY STR G4 TF M BLK UDI
21015146	CASE ASSY STR G4 TF M GRY UDI	21037540	CASE S/A 1.2L G4 TF BLUE UDI
21015147	CASE ASSY STR G4 SF S GRY UDI	21037541	CASE S/A 1.2L G4 TF GRAY UDI
21015147S	CASE ASSY STR G4 SF S GRY UDI	21037544	CASE S/A 1.2L G4 SF BLUE UDI
21015148	CASE ASSY STR G4 TF S BLK UDI	21037545	CASE S/A 1.2L G4 SF GRAY UDI
21015157	CASE ASSY STR G4 SF S BLK UDI	21037548	CASE S/A .6L G4 TF BLUE UDI
21015157S	CASE ASSY STR G4 SF S BLCK UDI	21037549	CASE S/A .6L G4 TF GRAY UDI

Pediatric LOX Part Numbers

Below is a list of pediatric LOX portables and reservoirs that can be ordered from CAIRE, as well as a list of flow control valves that can be used to retrofit existing units. The part numbers below only apply to the English language version of the units; European customers should contact customerservice.europe@chartindustries.com for language/country specific models.

PEDIATRIC MODELS:

LOX PORTABLES	PN 11928429- SPRINT T TF (TOP FILL) 2LPM
	PN 11928402- STROLLER T TF (TOP FILL) 2LPM
LOX RESERVOIRS	PN 13337403 - LIBERATOR 30T TF (TOP FILL) 2LPM
	PN 20606186 - LIBERATOR 30T DF (DUAL FILL) 2LPM
	PN 20651170 - LIBERATOR 45T TF (TOP FILL) 2LPM
PEDIATRIC FLOW CONTROL VALVES:	B-776129-00 - COMPANION 1000/1000T 0-4 LPM
	B-776134-00 - COMPANION RESERVOIRS 21L, 31L, 41L 0-4 LPM
	14700235T - STROLLER/SPRINT 0-2 LPM
	14700243T - LIBERATOR 20L, 30L, 37L, 45L, 60L 0-2 LPM

Companion® Reservoir Contents Indicators—Cleaning and Leak Checking

Did you know CAIRE has recommendations for cleaning Companion reservoir contents indicators? Even though the construction material of the indicators was changed in late 2011 to increase the resistance to cleaning and leak detecting agents, only approved solutions should be used. Below is the recommended cleaning procedure, as well as a list of approved cleaning, disinfecting, and leak detection solutions for use on the Companion indicators.

To avoid unnecessary damage to the contents indicator material when cleaning, ensure the following:

- Do not spray solution directly onto the contents indicator. Spray onto a cloth and apply using a cloth.
- After cleaning or leak checking, the surface must be rinsed with water.

Function	Acceptable Product
Cleaning	Sporicidin Disinfectant Solution
	Mild dish washing detergent/warm water solution
Disinfecting	Sporicidin Disinfectant Solution
	Household bleach (1:10 dilution) with water, freshly made within 24 hours)
Leak Detection	Snoop Liquid Leak Detector

Sporicidin is a registered trademark of:

Sporicidin International
121 Congressional Lane
Suite 600
Rockville, MD 20852
Tel: 301-231-7700
www.sporicidin.com

SNOOP is a registered trademark of:

Swagelok Co.
29500 Solon Road
Solon, OH 44139
Tel: 440-248-4600
www.swagelok.com

Companion® and Liberator® Reservoir Biennial Maintenance Requirement changed to 30 Months

CAIRE is releasing updated technical service manuals for our Companion and Liberator reservoir models. The most important part of the change is that the biennial maintenance interval on these reservoirs have been changed to 30 months. Also, there have been updates to the Liberator reservoir Flow Rate Test procedure and the acceptable flow ranges. Please see our website, www.cairemedical.com or <http://www.chartindustries.com/Respiratory-Healthcare/Respiratory-Healthcare-Knowledge-Center/Respiratory-Healthcare-Literature>, for the most up to date version of these technical manuals.

Parts and Accessories

eQuinox™ Desktop Charger

The new desktop chargers for the eQuinox unit are listed below:

- 4980-C1-SEQ - eQuinox batt desktop charger with European cord
- 4980-10-SEQ - eQuinox batt desktop charger with Japanese cord
- 4980-8-SEQ - eQuinox batt desktop charger with UK cord
- 4980-15-SEQ - eQuinox batt desktop charger with Israel cord
- 4980-SEQ - eQuinox batt desktop charger with US cord

Companion® 500/550

Companion 500 and Companion 550 liquid oxygen portables were discontinued as of February 1, 2013. All spare parts for these models will be obsolete and unavailable for purchase as of February 1, 2018. In addition, CAIRE repair facilities will no longer offer repair of these models, with the exception of re-pumping the vacuum insulation system.

The Companion 500/550 hip bag is no longer available. This bag was only for the C500/C550 which are discontinued models and that all other bags and carrying accessories for our current Liquid Oxygen products will remain available and unchanged.

FreeStyle® 5

There is an LED on the FreeStyle 5 that is green when it is functioning properly. The LED will turn red with a fault condition on the output or if the input voltage is too low (below approximately 10V DC). The red LED could also indicate an internal fault within the unit.

If the LED is red when plugged into the DC source without the FreeStyle 5 connected, either the input DC voltage is too low or there is a fault within the power supply. If the LED is green when plugged into the DC source and turns red when the FreeStyle 5, is plugged in it could mean that the DC source voltage is too low under load or there is an internal fault within the power supply.

HELIOS Portable

Effective 01/12/17, we have implemented a new format and new part number 21033264-C4 for the HELIOS H300 and H850 user manual. This is an improved format and will feature the following language combinations English, French, German, Spanish, Italian, Portuguese, Dutch, Danish, Norwegian, Swedish, Finnish, Greek, and Turkish.

Don't miss out on our upcoming Service Schools!

CAIRE Service School Training Seminars August 21 - 23 & 24 - 25, 2017 at Ball Ground, GA, United States

CAIRE offers Service Schools covering both LOX and Concentrator lines.

Each class is a comprehensive program that focuses on the technical and service aspects of the CAIRE family products. Class time is divided between lecture and hands-on workshops. The seminars will help the student develop a better understanding of how liquid oxygen equipment or concentrators work, how to identify the symptoms and causes of potential problems and how to use the technical information that is available in the Technical Manuals. Attendance at CAIRE's Service Schools is free, but registration is mandatory. Registration forms must be received one week prior to the start of the class in order to guarantee availability and materials.

Concentrator Service School topics include:

- Concentrator hazards and safety precautions
- Principles of pressure, flow and saturation
- Functions of the major components of a portable/stationary concentrator
- Theory of operation
- Hands-on experience with the concentrators
- Set up and use of test equipment
- Troubleshooting, repair and performance verification/testing procedures with hands-on experience

LOX Service School topics include:

- Liquid oxygen (LOX) hazards and safety precautions
- Principles of pressure, flow and liquid oxygen saturation
- Functions of the major components of a liquid oxygen system
- HELIOS™ system theory of operation
- Reservoir and portable filling procedures with hands-on experience
- Set up and use of test equipment

- Troubleshooting, repair and performance verification/testing procedures with hands-on experience

2017 Training Dates

May 2017

Concentrator Training- Presented in German: May 16- 18 in Wuppertal, Germany

Concentrator Training- Presented in Italian: May 23- 25 in Padova, Italy

We would like to remind you that spaces are limited.

To register for Service School, please email:

techservice.usa@chartindustries.com for USA Training

jim.gibson@chartindustries.com for European Training

2017 Trade Shows

Show	Date	Location
GAMES	May 11	Atlanta, GA, USA
CMEF	May 15 - 18	Shanghai, China
PAMS	May 17 - 19	State College, PA, USA

PLEASE CONSULT THE APPLICABLE PRODUCT INSTRUCTIONS FOR USE FOR PRODUCT INDICATIONS, CONTRAINDICATIONS, WARNINGS, PRECAUTIONS, AND DETAILED SAFETY INFORMATION.