



Models 511, 511WG, 512, 523



PRODUCT INFORMATION AND INSTRUCTIONS



CHAD[®]
THERAPEUTICS

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GENERAL INFORMATION

This manual provides information necessary to operate the CYPRESS OXYpneumatic® conservator with built-in regulator.

The CYPRESS conservers can be used with CGA 870 or CGA 540 cylinders at home or away from home to provide your specific oxygen requirements.

- CGA 870 Valve (Models 511, 511WG, and 512)
- CGA 540 Valve (Model 523)

Statements in this manual preceded by the following words are of special significance:

WARNING

Indicates there is a possibility of injury to you or others.

CAUTION

Indicates there is a possibility of damage to the device or to other property.

NOTE

Indicates points of particular interest or emphasis that allow for more efficient and convenient operation of the equipment.

IMPORTANT SAFETY RULES & PRECAUTIONS



WARNING:

- Read and understand this manual before operating your CYPRESS OXYPneumatic oxygen conserver.
- This device is not intended for use during sleep or by patients who:
 - Breathe more than 40 breaths/minute,
 - Consistently fail to trigger equipment (e.g., mouth breathers).



Smoking near oxygen equipment is strictly prohibited. Keep cigarettes, matches, burning tobacco, and open flames, such as lighted candles, away from the area where the system is being stored or operated.

- Avoid creation of any spark, such as static electricity caused by any type of friction, near oxygen equipment.

NOTE: Oxygen will not burn; however, it does vigorously accelerate the burning of any flammable material.

- **Never** use oil, grease, or petroleum-based products on or near the system. Please wash and dry your hands properly prior to operating your oxygen equipment.
- **Never** use aerosol sprays near the equipment.
- Not suitable for use in the presence of flammable anesthetic mixture.
- Be sure to turn off oxygen supply by closing the cylinder valve when not in use.
- Use cannula tubing no longer than 7 feet (2.13m).
- Do not use mask, pediatric, or other low-flow cannula tubing when operating the unit.



IMPORTANT SAFETY RULES & PRECAUTIONS

CAUTION:

- Federal (USA) law restricts this device to sale by or on the order of a physician.
- Prevent water or other liquid substances from entering the unit
- Prevent dust or any small particles from entering the unit
- Do not expose the unit to extreme temperatures
- Always maintain a backup supply of oxygen
- Do not use humidifier bottles
- Do not use if leaking or damaged
- Refer repairs to authorized service personnel

NOTE: Oxygen supplied by this equipment is supplemental only and is not intended for life support applications. The CYPRESS conserver should not be used to supply anything other than medical oxygen.

Please contact your Home Care Provider if you have any questions.

INTRODUCTION



The CYPRESS OXYPneumatic oxygen conserver includes a combination of a low-pressure regulator and an oxygen conserver, designed for use with a cylinder as an ambulatory oxygen system. It is capable of delivering a precise amount of supplemental oxygen at the optimal point in the breathing cycle. The CYPRESS conserver greatly increases the efficiency in the delivery of oxygen, maximizing the beneficial effects and eliminating unnecessary oxygen waste.

When we breathe, approximately one-third of the time is spent inhaling and two-thirds exhaling. As a result, oxygen delivered by continuous flow is wasted during exhalation. By eliminating oxygen flow during exhalation, a two-thirds savings is possible. Additionally, the oxygen available during the very first part of inhalation contributes most to meeting oxygen needs. The CYPRESS conserver takes advantage of these facts to provide maximum efficiency in the delivery of oxygen. This device is designed to be an integral component of a lightweight, long-lasting ambulatory oxygen system.

DESCRIPTION OF PARTS & CONTROLS

CGA 870 Models

- **Cylinder Adjustment Knob:** This is used to attach the unit to any CGA 870 post-valve cylinder.
- **Oxygen Pressure Gauge*:** Enables the user to monitor the contents of the compressed oxygen cylinder and is protected by a rubber guard. (Does not apply to Model 511WG.)
- **Selector Switch**:** Enables the user to select the desired setting, as well as "OFF" and "CF" (continuous flow). When not in use, the switch should be turned to the "OFF" position.
- **Oxygen Supply Outlet:** Use this fitting to attach a standard cannula.
- **Cylinder Alignment Pins:** When assembling the unit, these parallel pins must be inserted into the holes on the CGA 870 post valve.
- **CGA 870 Seal [Gasket, FR-870G, viton or equivalent]:** Creates the interface between the post valve and the CYPRESS conserver. Besides offering a rugged interface, it also surrounds the oxygen path in a ring of stainless steel or brass.
- **Vent Hole:** Maintains proper internal pressure. Do not obstruct with any object, such as a label or tight-fitting carrying bag.

WARNING: Use only a manufacturer specified gasket.

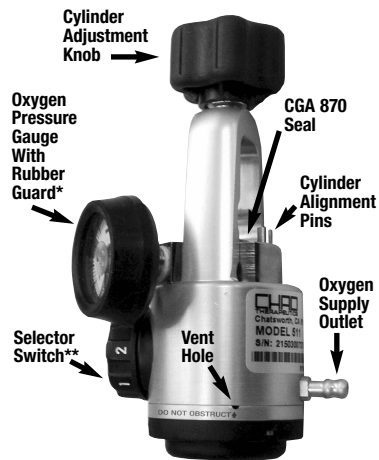


FIGURE A

CYPRESS OXYPneumatic Conserver
with CGA 870 Connection
(Model 511 shown here)

*Model 511WG does not have a gauge.

**Selector switch settings will vary according to model (see specifications on page 17).

DESCRIPTION OF PARTS & CONTROLS

CGA 540 Model

- **Connector:** The end of this component mates with the cylinder valve.
- **O-Ring [FR-540G, viton or equivalent]:** Ensures adequate seal between the cylinder valve and the conserver to prevent oxygen leaks.
- **Cylinder Alignment Nut and Handwheel:** These are used to attach the unit to any CGA 540 cylinder.
- **Oxygen Supply Outlet:** Use this fitting to attach a standard cannula.
- **Oxygen Pressure Gauge:** Enables the user to monitor the contents of the compressed oxygen cylinder and is protected by a rubber guard. (Does not apply to Model 511WG.)
- **Selector Switch:** Enables the user to select the desired setting, as well as "OFF" and "CF" (continuous flow). When not in use, the switch should be turned to the "OFF" position.
- **Vent Hole:** Maintains proper internal pressure. Do not obstruct with any object, such as a label or tight-fitting carrying bag.

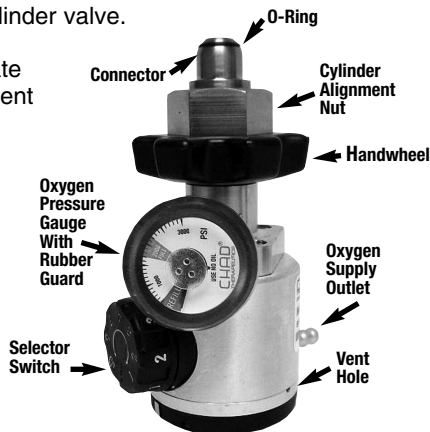


FIGURE B
CYPRESS OXYPneumatic Conserver
with CGA 540 Connection
(Model 523 shown here)

WARNING: Use only a manufacturer specified gasket.

DESCRIPTION OF PART & CONTROLS

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FIGURE C-1

Connection View of the
CYPRESS OXYPneumatic Conserver
with CGA 870 Connection
(Model 511 shown here)



FIGURE C-2

Connection View of the
CYPRESS OXYPneumatic Conserver
with CGA 540 Connection
(Model 523 shown here)

NOTE: The continuous flow setting (CF) is designed for emergency use only. The amount of oxygen delivered when using the CYPRESS conserver in continuous flow mode is preset to 2 lpm (liters per minute). Remember that in this mode the oxygen will be consumed at a much faster rate. Return to another source before running out of oxygen.

ASSEMBLY AND USE



- Make certain that your hands are free of oil, grease, and other contaminants.
- Inspect the unit to ensure that it has the appropriate viton (or equivalent) gasket, in good working condition, attached to the inlet nozzle.
- Secure the cylinder in an upright position.
- Inspect the valve of the cylinder and the CYPRESS conserver to ensure they are free of contaminants. If any indication of damage or contamination is detected, **DO NOT** use the equipment and contact your Home Care Provider.

WARNING: Use ONLY a manufacturer specified gasket. An incorrect gasket may not be oxygen compatible or may cause an oxygen leak, creating an increased fire risk.

NON-PORTABLE USE:

The CYPRESS conserver is designed to extend the life of portable oxygen supplies when away from the primary source. While the CYPRESS conserver may be used with stationary oxygen sources, the unit should be used only while awake and reasonably attentive. The CYPRESS conserver is not intended for use while asleep because, in the unlikely event of operational malfunction or dislodging of the cannula, the user could be unaware and not make the necessary corrections.

ASSEMBLY AND USE

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INSTALLING THE SYSTEM (CGA 870 Models):

STEP 1: Loosen the cylinder adjustment knob.

STEP 2: Lower the CYPRESS conserver over any post valve cylinder with the alignment pins toward the holes on the cylinder neck [see Fig. D].

STEP 3: Line the two pins and gasket with the corresponding holes on the cylinder post valve.

 **NOTE:** Cylinder adjustment knob should be aligned with indentation on post valve.

STEP 4: While holding the unit in place, tighten the cylinder adjustment knob by turning clockwise [see Fig. D].

STEP 5: Attach a standard cannula (7 ft. or less in length) to the oxygen supply outlet.

 **NOTE:** Tighten only by hand. The use of a tool to tighten the knob may damage the unit.



FIGURE D

Attaching the CYPRESS OXYpneumatic Conserver to the Cylinder

ASSEMBLY AND USE

INSTALLING THE SYSTEM (CGA 540 Model):

STEP 1: Secure the cylinder in an upright position.

STEP 2: Slide the coupling nut/handwheel on the unit toward the pressure gauge so that the end of the connector is visible.

STEP 3: Insert the connector into the valve outlet on the cylinder.

STEP 4: Slide the coupling nut/handwheel toward the treads on the valve.

STEP 5: Tighten the union nut/handwheel by turning it clockwise.

STEP 6: Attach a standard cannula (7 ft. long or less) to the oxygen supply outlet.

 **NOTE:** Tighten only by hand.

FIGURE E
Attaching the
CYPRESS
OXY-Pneumatic
Model 523
Conserver
to the Cylinder



ASSEMBLY AND USE

OPERATING INSTRUCTIONS:

- STEP 1:** Make sure that the CYPRESS conserver is set to the “OFF” position before opening the cylinder valve.
- STEP 2:** To reduce the risk of rapid oxygen recompression and fire, open the cylinder valve slowly and completely so the pressure gauge moves slowly as it indicates the cylinder pressure.
- STEP 3:** Listen for leaks. If a leak is present, close the cylinder valve, check the CGA seal, and reinstall. If the leak persists, **DO NOT USE THE EQUIPMENT**. Contact your Home Care Provider for repair.
- STEP 4:** Check the CYPRESS oxygen pressure gauge to verify the cylinder pressure.
- STEP 5:** Select the setting on the CYPRESS conserver to the appropriate delivery setting [See Fig. F].
- STEP 6:** Ensure that the vent hole [see Figs. A & B, pg. 6] on the side of the unit is not obstructed.
- STEP 7:** As with any nasal cannula, place the nasal cannula into position with the prongs in the nostrils and begin breathing.

The CYPRESS conserver will now start to deliver oxygen. The amount of oxygen delivered per pulse is determined by the setting. A sound may be heard each time the unit delivers a pulse of oxygen. Adequate oxygenization will be achieved because of the precise time in the breathing cycle in which the pulse of oxygen is delivered.

NOTE: To help prevent possible damage to the unit and to maintain its cleanliness, keep the CYPRESS conserver in a carrying bag designed for use with your CYPRESS model.

- STEP 8:** When finished using the system, close the oxygen supply cylinder valve and continue breathing through the nasal cannula until no further oxygen is detected.
- STEP 9:** Remove the nasal cannula and turn the selector switch to the “O” (off) position.
- STEP 10:** When not in use, store in a clean, dry location.



FIGURE F
View of the CYPRESS
selector switch



FIGURE G
Carrying Bags

OXYGEN CYLINDER DURATION



Because the total delivery of oxygen via the CYPRESS conserver is related to the breathing rates, it is user adaptive in that the total oxygen delivered per minute will automatically adjust with user need, as expressed by increased or decreased breathing rates. For example, at all settings, twice as much oxygen per minute will be delivered if one breathes twenty (20) times per minute as compared with ten (10) times per minute. Tables 1 and 2 below can be used as a guide.

TABLE 1

CYPRESS Models 511, 511WG, 523	SETTING	1	2	3	4	5	6	Continuous
	Delivery Volume (ml)	16	32	48	64	80	96	2 lpm
Cylinder Type	Cylinder Volume Liters @ 2015 psi	Estimated Cylinder Duration in Hours (Based on 20 breaths/min)						
M2	36	1.9	0.9	0.6	0.5	0.4	0.3	0.3
M4(A)	113	5.9	2.9	2.0	1.5	1.2	1.0	0.9
M6(B)	164	8.5	4.3	2.8	2.1	1.7	1.4	1.3
M9(C)	246	12.8	6.4	4.3	3.2	2.6	2.1	2.1
D	425	22.1	11.1	7.4	5.5	4.4	3.7	3.5
E	680	35.4	17.7	11.8	8.9	7.1	5.9	5.7

TABLE 2

CYPRESS Model 512	SETTING	1	1.5	2	2.5	3	4	Continuous
	Delivery Volume (ml)	16	24	32	40	48	64	2 lpm
Cylinder Type	Cylinder Volume Liters @ 2015 psi	Estimated Cylinder Duration in Hours (Based on 20 breaths/min)						
M2	36	1.9	1.3	0.9	0.8	0.6	0.5	0.3
M4(A)	113	5.9	3.9	2.9	2.4	2.0	1.5	0.9
M6(B)	164	8.5	5.7	4.3	3.4	2.8	2.1	1.3
M9(C)	246	12.8	8.5	6.4	5.1	4.3	3.2	2.1
D	425	22.1	14.8	11.1	8.9	7.4	5.5	3.5
E	680	35.4	23.6	17.7	14.2	11.8	8.9	5.7



CARE AND MAINTENANCE

The CYPRESS conserver is designed for a long and accurate life; however, as with any pneumatic device, normal prudent care is required. The unit should be kept clean and free from moisture and dust, as well as extreme temperature. Do not expose the unit to water, such as when bathing or swimming. It is advisable to keep the system in its carrying bag to afford a degree of protection. Clean the outside of the unit periodically with a clean, lint-free cloth. Pay special attention to the oxygen inlet and outlet to make sure they remain free of dust, etc. If the oxygen inlet connection becomes contaminated with dirt, oil, or grease, **DO NOT USE OR ATTEMPT TO CLEAN**. Contact your supplier for service or repair.

Cannula tubing is a disposable accessory that should be replaced periodically following normal usage. Disposable tubing should be disposed of in accordance with local ordinances and/or regulations for disposal. Replacements are available through your Home Care Provider.

Clean the carrying bag using mild detergent, cold water, and a small scrub brush. Wet the brush and lightly scrub the bag. Be careful not to scrub the plastic window. When finished cleaning, rinse with fresh, cold water. Repeat cleaning, if necessary. Hang the bag in a well ventilated area and allow to air dry. **Do not hang in direct sunlight.**

TROUBLESHOOTING



PROBLEM	PROBABLE CAUSE	SOLUTION
Unit does not pulse.	Cylinder valve is closed.	Turn the cylinder valve to the "ON" position.
	Cylinder is empty.	Check the oxygen gauge. Replace the cylinder, if empty.
	Oxygen cannula is blocked or kinked.	Remove kinks. Clean or replace, if necessary.
	Selector switch is set to the "OFF" position.	Make sure the selector switch is set to the appropriate setting.
Unit pulses or flows continuously.	Unit is set to the "CF" position.	Turn the selector switch to the appropriate delivery setting.
	Unit was not set to "OFF" prior to opening the cylinder valve.	Turn the selector switch to "OFF," wait a few moments, then set at proper delivery setting.
	Vent hole is obstructed.	Remove obstructions, such as labels or tight-fitting carrying bag, and resume use as usual.

Non-functioning units are subject to warranty provisions and the manufacturer repair/return policy. If necessary, call your Home Care Provider.

 **NOTE:** Do not attempt to open the unit. If the unit is opened or tampered with, the warranty is void.

CLASSIFICATIONS

The CYPRESS OXYPneumatic conserver is classified as:

- Not suitable for use in the presence of flammable anesthetic mixture with air, oxygen, or nitrous oxide.

SPECIFICATIONS



Oxygen Delivery:

[Refer to Tables 1 & 2
pg 13]

MODEL 511/511WG/523

SWITCH POSITION DELIVERY

0	OFF
1	16 ml
2	32 ml
3	48 ml
4	64 ml
5	80 ml
6	96 ml
CF	2.0 ± .5 lpm

MODEL 512

SWITCH POSITION DELIVERY

0	OFF
1	16 ml
1.5	24 ml
2	32 ml
2.5	40 ml
3	48 ml
4	64 ml
CF	2.0 ± .5 lpm continuous

Pressure:

200 psi to 3000 psi
(1.4 MPa to 20.7 MPa)

Regulator:

Built-in, 25 ± 5 psi – Brass high pressure with aluminum low pressure materials
(170 kPa ± 35 kPa)

Dimensions:

Models 511, 511WG and 512 - Approximately 5 in. L (13 cm) x 2.5 in. D (6.3 cm)
Model 523 - Approximately 4.3 in L (11 cm) x 3 in. D (7.6 cm)

Weight:

Models 511, 511WG and 512 - Approximately 15 ounces (425 grams)
Model 523 - Approximately 19 ounces (540 grams)

Operating Temperature:

32°F to 122°F (0°C to 50°C)

Operating Relative Humidity:

15% to 95%

Operating Altitude:

0 to 10,000 feet (0 to 3,048 meters)

Storage/Transportation:

Minimum -40°F (-40°C), 1% RH
Maximum 145°F (63°C), 44% RH

Shock:

Not to exceed IEC 68-2-27 requirements

Vibration:

Not to exceed IEC 68-2-6, IEC 68-2-34

SYMBOLS KEY:



No smoking or open flames



Consult accompanying documents



LIMITED WARRANTY

The CYPRESS OXYPneumatic oxygen conserver has been carefully manufactured and inspected and is warranted to be free from defects in workmanship and materials. Under this warranty, CHAD Therapeutics' obligation shall be limited to the replacement or repair of any such units or parts that prove, by CHAD's inspection, to be defective within two years from the date of purchase. Any abuse, operation other than the intended use of the product, negligence, accident or repair by other than authorized service professionals shall immediately void this warranty. This warranty does not extend to the cannula.

CHAD Therapeutics will not accept damages or charges for labor, parts or expenses incurred in making field repairs, except upon written authorization prior to such action.

The foregoing warranty is exclusive and in lieu of all other express warranties. Implied warranties, if any, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, shall not extend beyond the duration of the express warranty provided herein. In no event shall CHAD Therapeutics be liable for loss of use or profit or other collateral, special or consequential damages.

IMPORTANT INFORMATION TO RECORD

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Your Name: _____

Date you received your unit: _____

Prescribed oxygen flow setting:

- At rest: _____
- During exercise: _____

Home Care Provider's Name: _____

Home Care Provider's Phone Number: (_____) _____

Physician's Name: _____

Physician's Phone Number: (_____) _____

Notes: _____



NOTES

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