

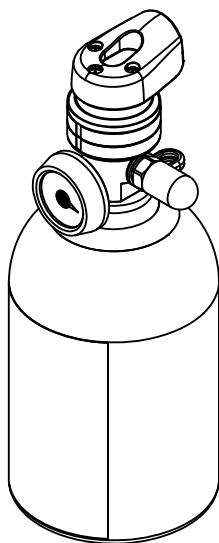
Operator's Manual

HomeFill™ **Oxygen Conserving Cylinder**

HF2PCL6

HF2PC9

HF2PCL4



Dealer: This manual MUST be given to the end user.

User: Before using this cylinder, read this manual and save for future reference.

**For more information regarding
Invacare products, parts, and services,
please visit www.invacare.com**



Yes, you can.

⚠ WARNING

DO NOT OPERATE THIS PRODUCT OR ANY AVAILABLE OPTIONAL EQUIPMENT WITHOUT FIRST COMPLETELY READING AND UNDERSTANDING THESE INSTRUCTIONS AND ANY ADDITIONAL INSTRUCTIONAL MATERIAL SUCH AS OWNER'S MANUALS, SERVICE MANUALS OR INSTRUCTION SHEETS SUPPLIED WITH THIS PRODUCT OR OPTIONAL EQUIPMENT. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS, OR INSTRUCTIONS, CONTACT A HEALTHCARE PROFESSIONAL, DEALER OR TECHNICAL PERSONNEL BEFORE ATTEMPTING TO USE THIS EQUIPMENT - OTHERWISE INJURY OR DAMAGE MAY OCCUR.

⚠ ACCESSORIES WARNING

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

NOTE: Updated versions of this manual are available on www.invacare.com.

TABLE OF CONTENTS

SPECIAL NOTES 4

RECEIVING INSPECTION 5

INTENDED USE 5

SECTION 1—GENERAL GUIDELINES 6

 Operating Information 6

 Maintenance..... 8

SECTION 2—FEATURES 9

SECTION 3—TYPICAL PRODUCT PARAMETERS ... 10

SECTION 4—INSPECTION AND COMPRESSOR INTERFACE 11

 Cylinder Prefill Inspection 11

 Connecting/Disconnecting the Cylinder to/from the Compressor..... 14

SECTION 5—OPERATING INSTRUCTIONS 19

SECTION 6—MAINTENANCE 21

SECTION 7—CYLINDER FILL TIMES 22

 Troubleshooting 22

 Replacement Parts - Accessories 22

LIMITED WARRANTY 23

SPECIAL NOTES

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the following table for definitions of the signal words.

SIGNAL WORD	MEANING
DANGER	Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

NOTICE

The information contained in this document is subject to change without notice.

DANGER

DO NOT SMOKE while using this device. Keep all matches, lit cigarettes or other sources of ignition out of the room in which this product is located and away from where oxygen is being delivered.

NO SMOKING signs should be prominently displayed. Textiles and other materials that normally would not burn are easily ignited and burn with great intensity in oxygen enriched air. Failure to observe this warning can result in severe fire, property damage and cause physical injury or death.

CAUTION

“Caution: Federal law restricts this device to sale by or rental or on the order of a physician, or any other practitioner licensed by the law of the state in which he/she practices to use or order the use of this device.”

RECEIVING INSPECTION

Remove product from package and inspect for damage. If there is any damage, DO NOT use. Contact your dealer/ Home Care equipment provider.

INTENDED USE

To store, regulate, and deliver supplemental oxygen to patients who may have difficulty extracting oxygen from the air they breathe. It is for patients who would normally receive the oxygen via a nasal cannula. The device delivers USP 93% oxygen at a number of different flow/pulse settings. It is intended to be used as an oxygen saving device that may reduce the drying out of the airways.

SECTION I—GENERAL GUIDELINES

In order to ensure the safe installation, assembly and operation of the HomeFill Oxygen Conserving Cylinder these instructions **MUST** be followed.

⚠ WARNING

This section contains important information for the safe operation and use of this product.

Operating Information

Only personnel instructed and trained in the use of the HomeFill O₂ Conserving Cylinder should operate this product.

Product contains magnetic, ferrous material that may affect the results of an MRI.

Be sure all connections are tight and leak free.

DO NOT autoclave.

DO NOT gas sterilize with ethylene oxide.

DO NOT clean with aromatic hydrocarbons.

DO NOT immerse product in any kind of liquid.

Store product in a clean area when not in use.

Only use Invacare Corporation HF2PCL6 carrying bag, HF2PC9 carrying bag, or HF2PCL4 carrying bag.

NEVER smoke in an area where oxygen is being administered.

ALWAYS confirm prescribed dose before administering to patient and monitor on a frequent basis.

DO NOT use if dirt or contaminants are present on or around cylinder, valve, product or connecting devices.

NEVER use near any type of flame or flammable/explosive substances, vapors or atmosphere.

ALWAYS follow ANSI and CGA standards for Medical Gas Products and Flowmeters (E-7) and Oxygen Handling (G-4).

NO OXYGEN is delivered when the pointer is aligned with "Off".

DO NOT block the outlet fitting or kink the cannula when the product is in use, this may damage the unit.

The use of this device is limited to the oxygen patient.

Cylinders MUST be used only by the oxygen patient and are not to be distributed to any other individual for any purpose.

This product is NOT to be used by patients who breathe through their mouths.

DO NOT use oils, greases, organic lubricants or any combustible materials on or near this product. Wash and dry hands properly prior to usage.

DO NOT allow oil from your hands or other sources to come into contact with the compressor coupling or bottle fittings. These substances may become flammable in the presence of oxygen and cause injury. Avoid touching the bottle fitting whenever possible. Example of items to avoid are hand creams or lotions, cooking oils, suntan oils or sunblocks and similar oily products. If you use these types of products, wash your hands prior to using the HomeFill unit. If the bottle fitting should come in contact with such substances it should be cleaned off with a damp cloth prior to connecting it to the compressor.

NEVER oil or lubricate the compressor coupler or bottle fittings. NEVER use any penetrating oil or lubricant such as WD-40® or 3-in-1 oil®. If connection difficulty is experienced verify that the bottle fitting is being inserted straight down into the compressor coupler. If continued difficulty is experienced contact your supplier for assistance.

DO NOT use a humidifier with this product.

DO NOT allow cylinders to tip or fall. Secure gas cylinders so they cannot fall. Ensure cylinder is always in upright position.

DO NOT store cylinders near sources of heat or flame.

This product is equipped with a relief valve. If you hear a loud hissing or popping sound coming from the product, discontinue use of product, turn the flow selector to the “Off” position, and contact your dealer/Home Care equipment provider.

DO NOT use while sleeping without consulting your healthcare provider.

This product is designed to operate with a standard single lumen, adult oxygen nasal cannula with a maximum length of seven feet.

The cannula is for single patient use only.

Cannula MUST be installed on outlet connection prior to use.

DO NOT place the unit under clothing while in use. When this product is in use a small amount of oxygen is vented. Wearing the unit under clothing may saturate fabrics with oxygen and cause them to burn rapidly if exposed to sparks or flame. It may take several hours for oxygen levels in fabrics to return to normal.

Maintenance

DO NOT use a liquid leak detector to test for leaks.

DO NOT attempt to repair product.

SECTION 2—FEATURES

⚠ DANGER

This product is not intended as a life-sustaining or life-supporting device.

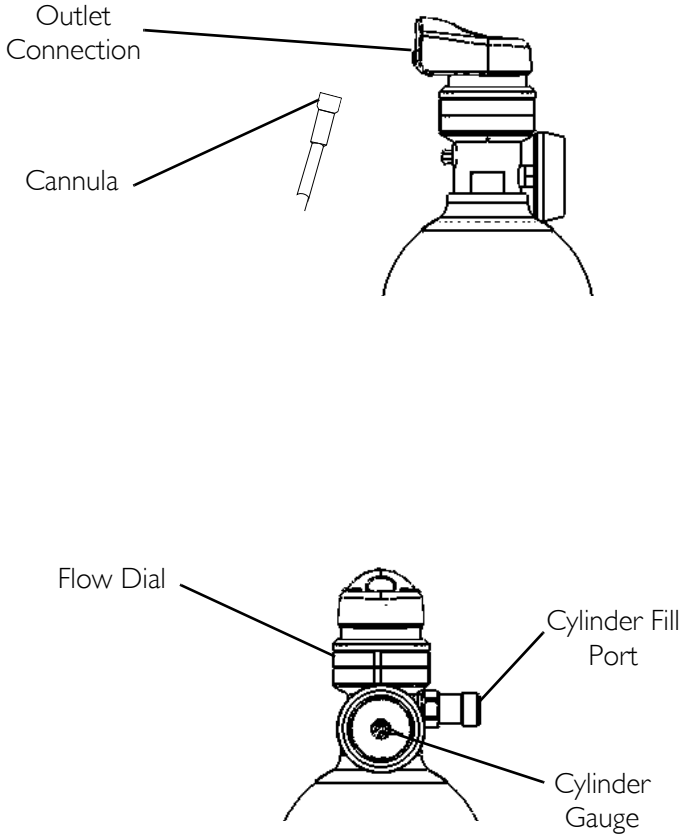


FIGURE 2.1 Product Diagram

SECTION 3—TYPICAL PRODUCT PARAMETERS

CONSERVER S/N RANGE	1-69,999	75,000 +
INLET PRESSURE RANGE:	300 - 2100 psig	300 - 2100 psig
INTERNAL REGULATED PRESSURE:	50 psig	50 psig
DIMENSIONS:		
HF2PCL6: Weight	4.3 lbs (1.95 kg)	4.1 lbs (1.86 kg)
HF2PCL6: Overall Length	11.1 in (28 cm)	10.9 in (27.7 cm)
HF2PCL6: Diameter	4.4 in (11.1 cm)	4.4 in (11.1 cm)
HF2PC9: Weight	5.3 lbs (2.4 kg)	5.1 lbs (2.31 kg)
HF2PC9: Overall Length	14.2 in (36 cm)	14 in (35.5 cm)
HF2PC9: Diameter	4.4 in (11.1 cm)	4.4 in (11.1 cm)
HF2PCL4: Weight	N/A	3.6 lbs (1.63 kg)
HF2PCL4: Overall Length	N/A	8.9 in (22.2 cm)
HF2PCL4: Diameter.	N/A	4.4 in (11.1 cm)
PULSE SETTINGS:	1,2,3,4, & 5	
FLOW SETTINGS:	2 LPM Continuous	
SAVINGS RATIO:	Up to 4.3:1	Up to 5.7:1
CANNULA REQUIREMENT:	4 ft recommended (MS0204) (7 ft long max) std. adult single lumen oxygen nasal cannula.	
OPERATING CONDITIONS TEMPERATURE:	32°F (0°C) to 105°F (40.6°C)	35°F (1.7°C) to 105°F (40.6°C)
ALTITUDE:	0 to 5280 ft (0 to 1600 m)	0 to 10,000 ft (0 to 3071 m)
STORAGE CONDITIONS TEMPERATURE:	-40°F (-40°C) to 140°F (60°C)	-40°F (-40°C) to 140°F (60°C)
MAXIMUM HUMIDITY:	95%	

SECTION 4—INSPECTION AND COMPRESSOR INTERFACE

NOTE: Refer to the HomeFill Compressor Owner's Manual for compressor operating instructions.

Cylinder Prefill Inspection

⚠ WARNING

All cylinders **MUST** be inspected before attempting to fill; otherwise, injury or damage may occur.

NEVER smoke in an area where oxygen is being administered.

NEVER use near any type of flame or flammable/explosive substances, vapors or atmosphere.

NOTE: For this procedure, refer to FIGURE 4.1.

The Hydrostatic Testing Date

Aluminum cylinders **MUST** undergo testing every five years.

⚠ WARNING

DO NOT fill cylinders that have not been tested in the past five years. Otherwise, serious personal injury may result. Contact your dealer for replacement.

External Examination

1. Examine the outside of the cylinder for the following conditions, and replace the cylinder if they exist:
 - Dents or dings
 - Arc Burns
 - Oil or Grease
 - Any other signs of damage that might cause a cylinder to be unacceptable or unsafe for use.
2. Examine the cylinder for evidence of fire or thermal damage. Evidence includes charring or blistering of the paint, or other protective coating or heat sensitive indicator. If fire or thermal damage is found, replace the cylinder.
3. Inspect the cylinder fillport for the following, and replace if found:
 - Debris, oil or grease
 - Noticeable signs of damage
 - Signs of corrosion inside the valve
 - Signs of excessive heat or fire damage

▲ DANGER

Improper filling or abuse of this cylinder, or failure to follow these safety instructions may cause serious bodily injury or death. High pressure oxidizing gas vigorously accelerates combustion.
 DO NOT alter or modify cylinder or related components.
 DO NOT use oil or grease. Keep cylinder, cylinder valve, all equipment and connections free of oil and grease to avoid violent ignition resulting in serious bodily injury or death.

▲ WARNING

For medical applications. Use only as directed by a licensed practitioner. Uninterrupted use of high concentrations of oxygen over a long duration, without monitoring its effect on oxygen content of arterial blood, may be harmful.

Oxygen Cylinders filled by the Venture HomeFill shall be used for personal use only. "Not to be filled for resale or use by professional users".

This cylinder is to be used with the Invacare Venture HomeFill system. This cylinder contains 93 ± 3% oxygen produced by an oxygen concentrator using the pressure swing adsorption process.

DO NOT handle cylinder or use contents until you are professionally trained, including emergency procedures.

Use in accordance with Venture HomeFill Operator's Manual. Open valve slowly. Close valve after each use and when empty. Secure cylinder during storage and use. No smoking in cylinder area. Keep away from heat, flame and spark. Keep out of reach of children. DO NOT drop.

Filling of this gas is performed by Venture HomeFill Only.

Cylinders that have been refinished and/or exposed to elevated temperatures must be hydrostatically tested before filling. Cylinder temperature should not exceed 125° F (52° C). Aluminum cylinders subject to the action of fire or heated to temperatures in excess of 350° F must be withdrawn from service and condemned by trained personnel. DO NOT use caustic paint strippers. Valve and safety relief devices must be removed and replaced by trained and authorized personnel. DO NOT alter or change valve assembly.

Invacare Corporation
 2101 E. Lake Mary Blvd.
 Sanford, FL 32773
 1-800-832-4707

DO NOT REMOVE THIS PRODUCT LABEL
Not for Commercial Resale
 Part Number 1125090 Rev C

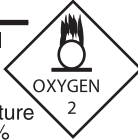


FIGURE 4.1 External Examination

Connecting/Disconnecting the Cylinder to/from the Compressor

Connecting the Cylinder to the Compressor

⚠ WARNING

NEVER use tools of any kind to connect/disconnect the cylinder and the compressor. Otherwise, severe injury and/or damage may occur.

DO NOT drop oxygen cylinders. Use two hands when handling/transporting oxygen cylinders. Otherwise, injury or damage may occur.

DO NOT use a liquid leak detector to test for leaks.

NOTE: For this procedure, refer to FIGURE 4.2 and FIGURE 4.3.

1. Examine the cylinder gauge. If the cylinder pressure is **less** than 1500 psig., proceed to STEP 2 (FIGURE 4.3).

*NOTE: If the cylinder pressure is **greater** than 1500 psig., DO NOT attempt to top off this cylinder. It may not fill.*

2. Set the regulator flow dial on the cylinder to OFF (FIGURE 4.3).
 3. Remove the cylinder and connector fillport covers (if present).
-

CAUTION

DO NOT connect the outlet (cannula) connection to the HomeFill unit, otherwise the conserving cylinder will not work properly.

4. Momentarily push **DOWN** on the outer ring (sleeve) of the connector fillport to reset the connector as shown in FIGURE 4.2.
-

NOTE: If the outer ring (sleeve) is in the UP position (GREEN dots not visible), the connector fillport will not be able to accept the cylinder fillport. Pushing DOWN momentarily will reset the connector fillport (GREEN dots visible) to accept the cylinder fillport.

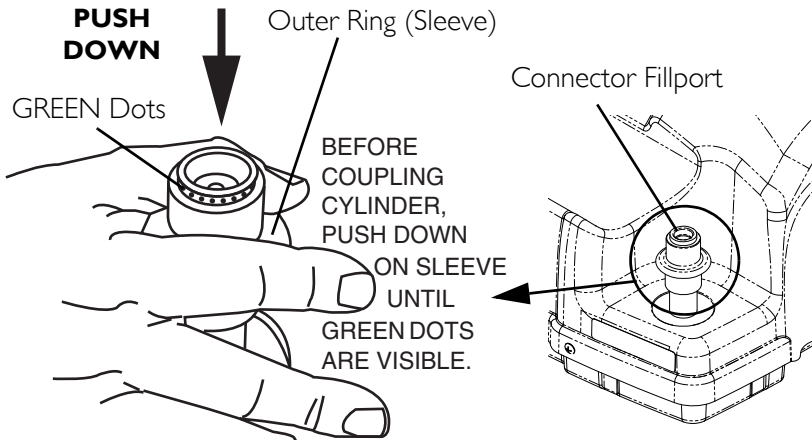
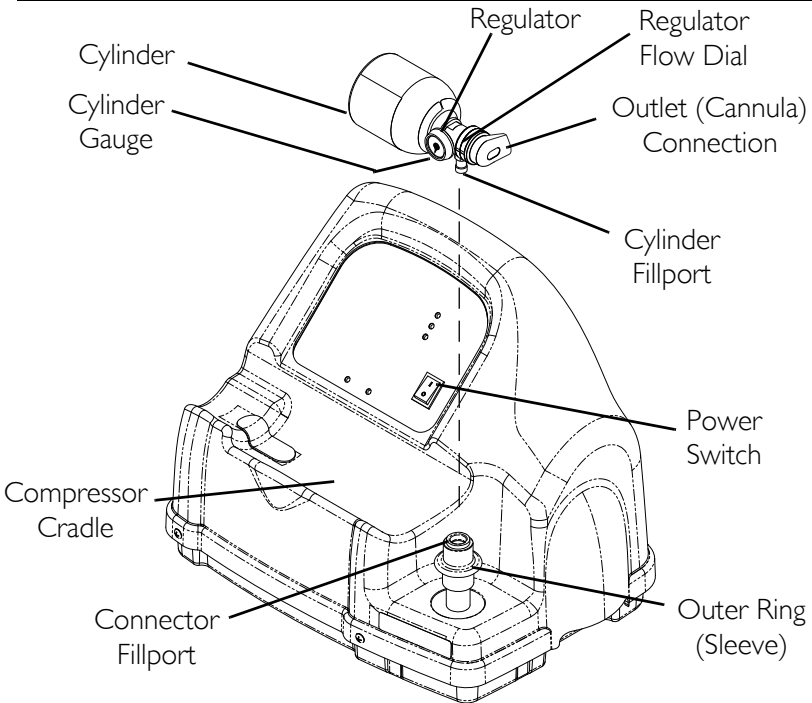
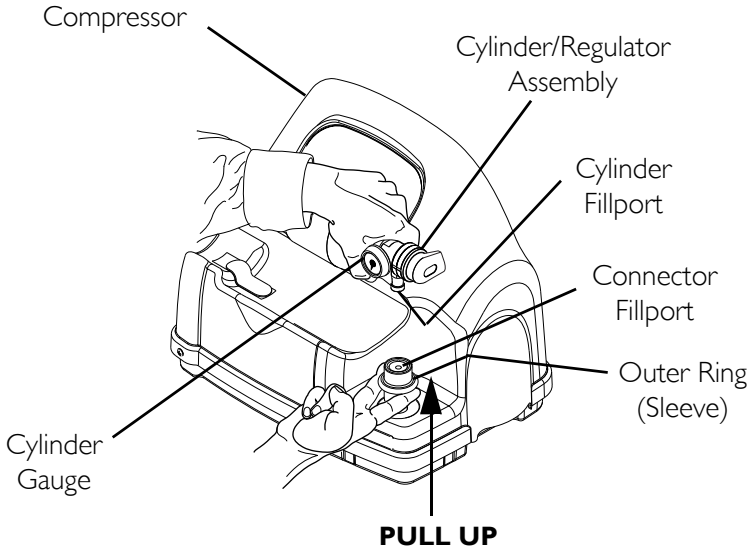


FIGURE 4.2 Resetting Connector Fillport

5. Grasp the cylinder/regulator assembly in the area behind the cylinder gauge (FIGURE 4.3).
6. Position the cylinder in the compressor cradle (FIGURE 4.3).
7. Align the cylinder fillport with the connector fillport (FIGURE 4.3).
8. Pull UP on the outer ring (sleeve) of the connector fillport while pushing DOWN on the cylinder/regulator assembly to couple the cylinder fillport into the connector fillport (FIGURE 4.3).

NOTE: The cylinder is properly connected when an audible “click” is heard.

SECTION 4—INSPECTION AND COMPRESSOR INTERFACE



NOTE: Fillport covers not shown for clarity.

FIGURE 4.3 Connecting the Cylinder to the Compressor

Disconnecting the Cylinder from the Compressor

⚠ WARNING

NEVER use tools of any kind to connect/disconnect the cylinder and the compressor. Otherwise, severe injury and/or damage may occur.

NOTE: For this procedure, refer to FIGURE 4.4.

1. Press the compressor power switch to the Off (O) position.
2. Grasp the cylinder/regulator assembly in the area behind the cylinder gauge.
3. With the other hand, grasp the outer ring (sleeve) of the connector fillport and push DOWN.
4. Lift up on the cylinder/regulator assembly to remove from the connector fillport.

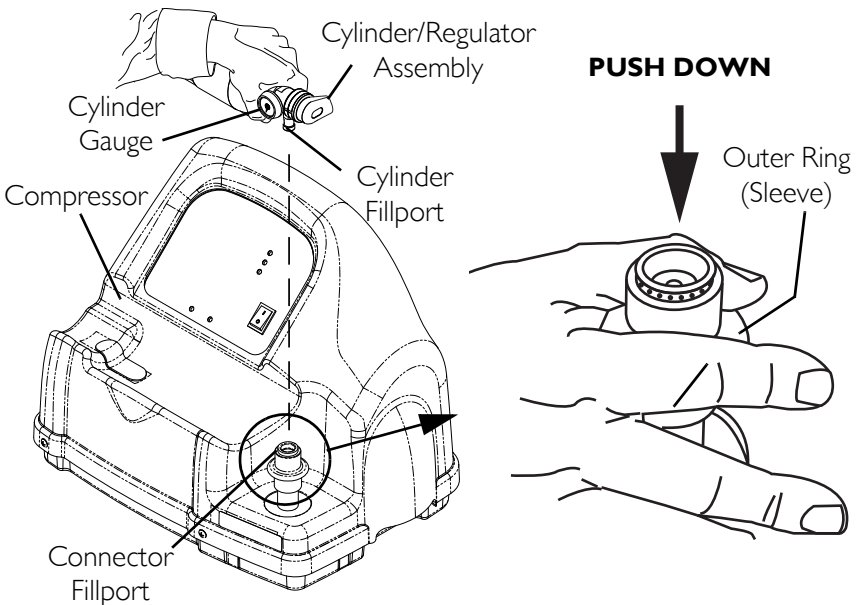


FIGURE 4.4 Disconnecting the Cylinder from the Compressor

SECTION 4—INSPECTION AND COMPRESSOR INTERFACE

5. When the cylinder fillport is disconnected from the connector fillport, release the outer ring (sleeve) of the connector fillport and use two hands to remove the cylinder from the compressor cradle.
6. Place the fillport covers onto the connector and cylinder fillports.

NOTE: The fillport covers should be used whenever cylinders are not being filled.

SECTION 5—OPERATING INSTRUCTIONS

⚠ WARNING

NEVER smoke in an area where oxygen is being administered.

NEVER use near any type of flame or flammable/explosive substances, vapors or atmosphere.

NOTE: For this procedure, refer to FIGURE 5.1.

1. Prior to each use, inspect product for visible damage. DO NOT use if any damage is found.

NOTE: If for any reason, any label becomes illegible or lost, contact your dealer/Home Care equipment provider.

2. Be sure regulator is in the “Off” position. Align “Off” with the indicating pointer.
 3. Position the cylinder so the oxygen cylinder valve outlet is pointing away from the user and any other person(s).
-

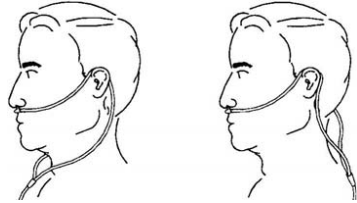
⚠ WARNING

DO NOT direct flow of oxygen at any person, or flammable material when adjusting the flow dial.

4. Attach a standard adult single lumen oxygen nasal cannula, no longer than seven feet to the product’s outlet according to the cannula manufacturer’s instructions. DO NOT use pediatric, low flow nasal cannulas or oxygen masks with this product.

NOTE: A unit without cannula attached may pulse if set at position 1-5.

5. Place the cannula over your ears and position the prongs in your nose as instructed by your Health Care provider or cannula manufacturer. Refer to FIGURE 5.1.



6. Turn dial until indicating pointer is aligned with the prescribed setting.

FIGURE 5.1 Cannula Placement

⚠ WARNING

When pointer on contents gauge enters red zone, it is recommended to refill the cylinder on the Invacare HomeFill Compressor.

NO OXYGEN is delivered in between settings. To obtain desired flow, the indicating pointer must align with a specific number on the dial.

To avoid injury to patient, ALWAYS confirm prescribed setting before administering to patient and monitor flow on a frequent basis.

Only use Invacare Corporation HF2PCL6 carrying bag, the HF2PC9 carrying bag, or the HF2PCL4 carrying bag.

7. Breathe through the nose and feel a pulse of oxygen as you inhale.

NOTE: When on a pulse setting, there is flow or a pulse only at the beginning of each breath. If you do not feel the pulse at the beginning of each breath, check the setting.

NOTE: Because each patient's breathing pattern is different and the environment varies, it may be difficult to feel some low setting pulses.

SECTION 6—MAINTENANCE

1. After each use, clean exterior of the product with a dry, lint free cloth only.
2. Store product in a clean area free from grease, oil, and other sources of contamination.

CAUTION

DO NOT use cleaning solutions.

DO NOT immerse product in any kind of liquid.

All repairs **MUST** be done by Invacare Corporation.

SECTION 7—CYLINDER FILL TIMES

NOTE: All filling times are approximate and may vary on environmental conditions.

Cylinder Filling Times	Concentrator Flow Rate to Patient: (Platinum 5 up to 3 L/min. and Platinum 10 up to 5 L/min)		
	HF2PC9	HF2PCL4	HF2PCL6
NORMAL	2 hr 20 min	60 min	1 hr 25 min
MAXIMUM	2 hr 45 min	1 hr 20 min	1 hr 50 min

Troubleshooting

If Conserving Cylinder fails to function, consult the Troubleshooting guide. If problem cannot be corrected, consult your Dealer/Home Care equipment provider.

PROBLEM	POSSIBLE CAUSE	SOLUTION
No flow.	<ol style="list-style-type: none"> 1. Regulator in “Off” position. 2. Cylinder empty. 3. Dial not set at increment. 4. Conserving not sensing breath. 	<ol style="list-style-type: none"> 1. Set to prescribed setting. 2. Replace/fill cylinder. 3. Set dial so indicator points to a setting. 4. Check position of cannula in nose. Do not breathe through mouth. 5. Check to see if the cannula is kinked.

Replacement Parts - Accessories

HF2PCL6 Carrying Bag, HF2PC9 Carrying Bag, or HF2PCL4 Carrying Bag

LIMITED WARRANTY

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products. This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

Invacare warrants this product to be free from defects in materials and workmanship for a period of two years from date of purchase. If within such warranty period any such product shall be proven to Invacare's satisfaction to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not apply to problems arising from normal wear and tear or failure to adhere to these instructions, nor does it include shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the Invacare service department during normal business hours at the toll-free telephone number identified on the back cover of this manual.

Upon receiving notice of an alleged defect in a product, Invacare will issue a serialized return authorization. It shall be the responsibility of the purchaser to pack the product(s) or part(s) in an appropriate manner to avoid shipping damage and return the product(s) or part(s), at the purchaser's expense, to either Invacare's plant or service center as specified by Invacare in advance. The defective product(s) or component part(s) must be returned for warranty inspection using the serial number as identification within 30 days of the return authorization date. **DO NOT** return any product(s) or part(s) to our factory or service center without prior consent. C.O.D. shipments will be refused – please pre-pay shipping charges.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED; PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE, OR STORAGE; PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS); PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE; PRODUCTS DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL; OR PRODUCTS REPAIRED BY ANYONE OTHER THAN INVACARE OR AN INVACARE SERVICE CENTER. SUCH EVALUATION SHALL BE SOLELY DETERMINED BY INVACARE.

THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES WHATSOEVER, WHETHER EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THE SOLE REMEDY FOR VIOLATIONS OF ANY WARRANTY WHATSOEVER, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. THE APPLICATION OF ANY IMPLIED WARRANTY WHATSOEVER SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESS WARRANTY PROVIDED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGE, OR LIMITATION OF HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE EXCLUSION AND LIMITATION MAY NOT BE APPLICABLE.

THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.



Yes, you can.

Invacare Corporation

www.invacare.com

USA

One Invacare Way
Elyria, Ohio USA
44036-2125
800-333-6900

All rights reserved. Trademarks are identified by the symbols [™] and [®]. All trademarks are owned by or licensed to Invacare Corporation unless otherwise noted.

Technical Services
800-832-4707

3-in-1 oil is a registered trademark of American Home Products Corporation. WD-40 is a registered trademark of WD-40 Company.

© 2008 Invacare Corporation

Part No 1112648 Rev F- 05/08