

User Manual



DEALER: These instructions **MUST** be given to the user of the product.

USER: **BEFORE** using this product, read this manual and save for future reference.

Yes, you can.®

Invacare PreciseR_x[™] Pediatric Flowmeter **Model IRCPF16**

I General

I.1 Symbols

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



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.



Gives useful tips, recommendations and information for efficient, trouble-free use.

2 Safety



WARNING

DO NOT USE 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.



WARNING

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.

A spontaneous and violent ignition may occur if oil, grease or greasy substances come in contact with oxygen under pressure. 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 this product. These substances **MUST** be kept away from the oxygen concentrator, tubing and connections, and all other oxygen equipment. **DO NOT** use any lubricants unless recommended by Invacare.

The PreciseR_x Pediatric Flowmeter is designed for an input pressure of 34.5 kPa (5 psi) only. The flowmeter is applicable only with Invacare concentrators with 34.4 kPa (5 psi) output pressure.

Keep out of reach of children.

DO NOT disassemble. Refer servicing to qualified service personnel.



Check ALL parts for shipping damage. If shipping damage is noted, **DO NOT** use. Contact carrier/dealer for further instructions.

3 Overview

3.1 Package Contents

This model number includes:

DESCRIPTION	QUANTITY
Flowmeter Stand	1
Crush-Proof Tubing (CP) - 25 ft (Max.) (7.5 m)	1
Crush-Proof Tubing - 7 ft (2.1 m) total	2
Humidifier Bottle Adapter	1
Humidifier Bottle	1
Connector	1
Packaging (Carton)	1
Instructions	1

3.2 Typical Product Parameters

INPUT PRESSURE RATING:	34.5 ± 3.45 KPa (5 ± 0.5 psi)
OXYGEN INPUT:	2 L/min
OXYGEN OUTPUT:	0 - 750 cc/min (0 - ¾ L/min)
FLOW ADJUSTABLE IN INCREMENTS	50 cc/min (1/16 L/min)
FLOW ACCURACY:	± 10% of full scale
WIDTH:	11.94 cm (4.7 in)
HEIGHT:	14.48 cm (5.7 in)
DEPTH:	14.48 cm (5.7 in)
WEIGHT:	0.8 kg (1.86 lbs)
SHIPPING WEIGHT:	1.1 kg (2.40 lbs)
OPERATING TEMPERATURE:	10°-35° C (50-95° F)
STORAGE TEMPERATURE:	-29° to 70° C (-20 to 158° C)

3.3 Handling

Unpacking/Inspection

1. Check for any obvious damage to the carton or its contents. If damage is evident, notify your carrier/ dealer for further instruction.
2. Remove all the loose packing from the carton.
3. Carefully remove all the components from the carton.

 Packing materials and carton should be kept for future use.

4. Examine exterior of the flowmeter for nicks, dents, scratches or other damages. Inspect all components.

Storage

1. Store the repackaged flowmeter in a dry area.
2. DO NOT place other objects on top of the repackaged device.

4 Usage

4.1 Typical Setup



WARNING

Place cannula on patient only after all tubing connections have been made. Possible water feedback through the tubing could occur if this sequence is not followed.

When adjusting the Pediatric Flowmeter, the flowmeter on the oxygen concentrator **MUST** be set @ 2.0 L/min. Failure to comply with this procedure will cause incorrect flow rates to the patient.

Invacare recommends that crush resistant oxygen tubing be used with this product.

If a humidifier bottle is not prescribed, the oxygen tubing is not to exceed 7.6 m (25 ft) in total length from the Pediatric Flowmeter to the patient, and the total length of **ALL** tubing **CANNOT** exceed 15.2 m (50 ft).

If a humidifier bottle is prescribed, the oxygen tubing is not to exceed 7.6 m (25 ft) in total length from the humidifier bottle to the patient, and the total length of **ALL** tubing for the Pediatric Flowmeter **CANNOT** exceed 11.8 m (39 ft).

❶ For this procedure, refer to FIGURE 1 or FIGURE 2.

1. Place the pediatric flowmeter stand on table top.
2. Turn the pediatric flowmeter knob to the fully open position.
3. Press concentrator power switch to the On position. The power light located on the control panel will illuminate GREEN. The alarm will beep indicating that the system is functioning properly.
4. Set the oxygen concentrator to 2.0 L/min.

❷ Allow concentrator to run a minimum of 10 min. to ensure proper concentration level.

Set Up If A Humidifier Bottle Is Not Prescribed

❶ For this procedure, refer to FIGURE 1.

1. Connect a 2.1 m (7 ft) oxygen tubing from the output fitting of the concentrator to the input fitting on the Pediatric Flowmeter.
2. Connect a 7.6 m (25 ft) max length oxygen tubing (not shown) to the output fitting on the Pediatric Flowmeter.
3. Attach the opposite end of the oxygen tubing to a nasal cannula using an appropriate oxygen tubing connector as applicable (not shown).

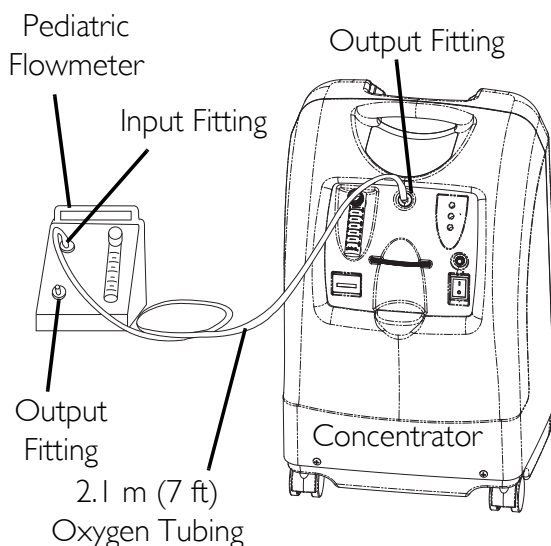


FIGURE 1 Typical Setup - Set Up If A Humidifier Bottle Is Not Prescribed

Set Up With A Humidifier Bottle If Prescribed

i For this procedure, refer to FIGURE 2.

1. Connect a 2.1 m (7 ft) max oxygen tubing from the output fitting of the concentrator to the input fitting on the pediatric flowmeter.
2. Follow the directions supplied by the humidifier bottle manufacturer for instructions on filling and connecting to oxygen tubing.
3. After filling the humidifier bottle with water, place it in the humidifier compartment on the Invacare concentrator (see concentrator owner's manual for mounting the bottle).
4. Connect 2.1 m (7 ft) max oxygen tubing from the pediatric flowmeter output fitting to the inlet of the humidifier bottle (using an appropriate adapter if applicable).
5. Connect 7.6 m (25 ft) max oxygen tubing to the outlet of the humidifier bottle (not shown).
6. Attach the opposite end of the oxygen tubing to a nasal cannula using an appropriate oxygen tubing connector (not shown).



CAUTION

DO NOT coil crush resistant oxygen tubing on COLD floor or condensation will form inside the tubing.

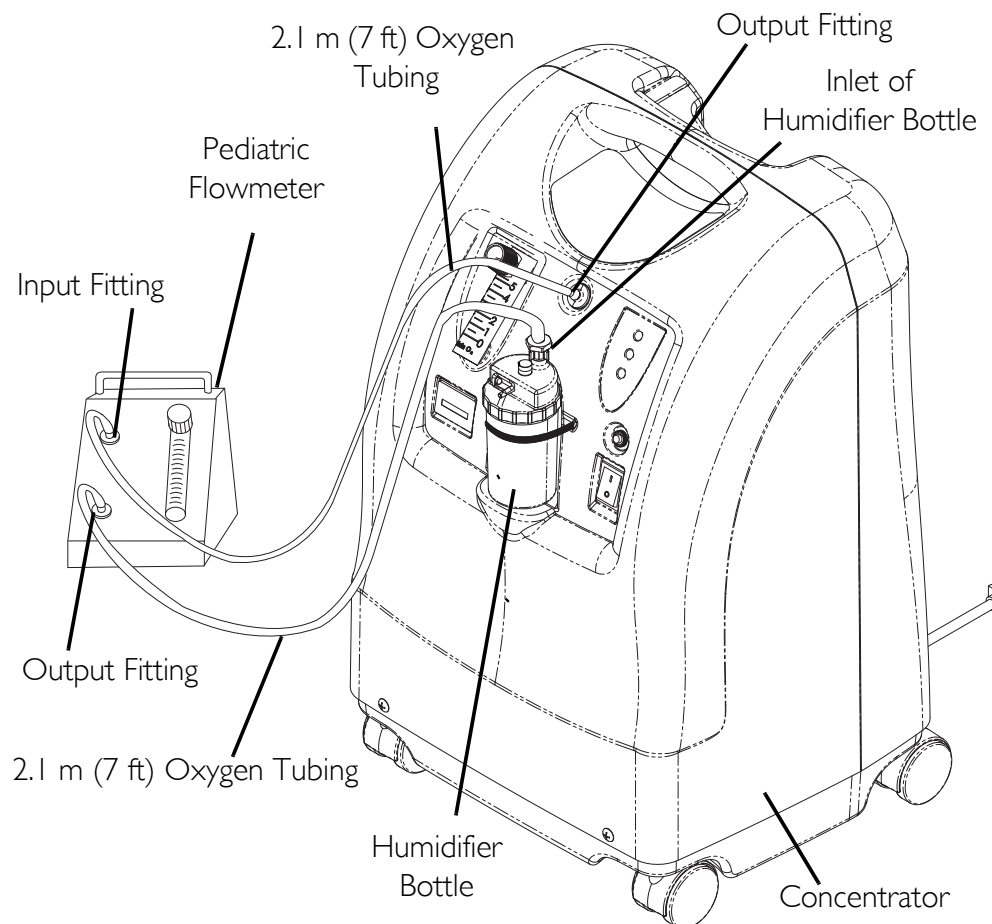


FIGURE 2 Typical Setup - Set Up With A Humidifier Bottle If Prescribed

Setting The Flowrate On The Pediatric Flowmeter

- ① For this procedure, refer to FIGURE 3.



WARNING

DO NOT select a different setting unless your physician has prescribed a change in the flowrate of the PreciseR_X Pediatric Flowmeter.



CAUTION

DO NOT allow water or other substances to enter flowmeter openings. DO NOT submerge flow stand, flowmeter or tubing.

1. Set the pediatric flowmeter to the setting prescribed by your physician.
 - ① Flowrate on the standard concentrator flowmeter will drop below the 2.0 L/min. setting after the Invacare PreciseR_X Pediatric Flowmeter is installed and operating.
2. Center the ball of the Pediatric Flowmeter with the line of the prescribed flowrate. This will ensure an accurate flowrate.
3. Place cannula on the patient.

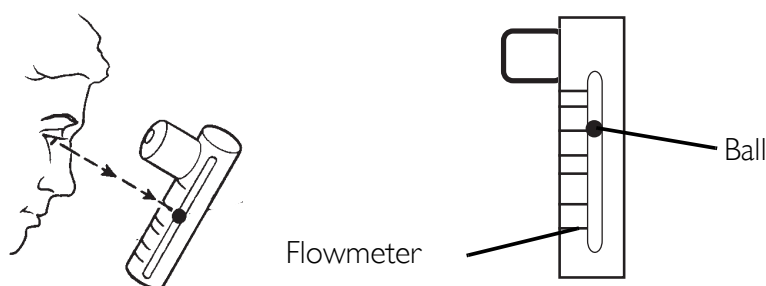


FIGURE 3 Setting The Flowrate On The Pediatric Flowmeter

5 Care and Maintenance

5.1 Cleaning

The unit can be cleaned with warm soapy water. Rinse with a soft damp cloth and dry thoroughly.

The humidifier bottle **MUST** be cleaned after each use.

Humidifier bottle and tubing **MUST** be changed after each patient.

5.2 Service and Preventative Maintenance



CAUTION

DO NOT allow water or other substances to enter flowmeter openings. DO NOT submerge flow stand, flowmeter or tubing.

The PreciseR_X[™] Pediatric Flowmeter is specifically designed to minimize routine preventive maintenance.

If damage to the unit is suspected, or if for any reason flow accuracy is in question, Invacare recommends returning the unit to Invacare for calibration by qualified personnel.

6 Limited Warranty

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 who purchases this product when new and unused from Invacare Corporation or a dealer. This warranty is not extended to any other person or entity and it is not transferable or assignable to any subsequent purchaser or owner. Coverage under this warranty will end upon any such subsequent sale or other transfer of title to any other person. This warranty gives you specific legal rights and you may also have other legal rights which may vary from state to state.

Invacare Corporation warrants its Pediatric Flowmeter when purchased new and unused to be free from defects in materials and workmanship for a period of one year from date of purchase from Invacare or a dealer, with a copy of the seller's invoice required for coverage under this warranty.

If within such warranty periods any such product shall be proven to Invacare Corporation's satisfaction to be defective, such product shall be repaired or replaced, at Invacare Corporation's option. This warranty only applies to the labor for repairs performed by the Invacare Service Department or Invacare Authorized Service Centers. It does not apply to the labor performed by the purchaser or user. This warranty does not include normal wear and tear or shipping charges. Invacare Corporation's sole obligation and your exclusive remedy under this warranty shall be limited to such repair or replacement. Routine maintenance items, such as filters, are excluded from this warranty.

For warranty service, please contact Invacare Corporation's Service Department at the toll free number on the back cover. Upon receiving notice of an alleged defect in a product, Invacare Corporation will issue a serialized return authorization. It shall then be the responsibility of the purchaser to return the entire unit or remove, at purchaser's cost, the defective component part(s) identified, pack the component part(s) in a manner to avoid shipping damage and to ship the component part(s) to either Invacare Corporation's plant or service center as specified by Invacare Corporation in advance. Defective component part(s) MUST be returned for warranty inspection using the serial number as identification within thirty days of return authorization date. DO NOT return products to our factory without prior consent. C.O.D. shipments will be refused; please prepay shipping charges.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO PRODUCTS SUBJECT TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, SOOT OR SMOKE-FILLED ENVIRONMENTS, OR OTHER THAN NORMAL APPLICATION, USE OR SERVICE, OR TO PRODUCTS MODIFIED WITHOUT INVACARE CORPORATION'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS) OR TO PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE CORPORATION OR TO PRODUCTS DAMAGED BY CIRCUMSTANCES BEYOND INVACARE CORPORATION'S CONTROL.

THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES WHATSOEVER, WHETHER EXPRESS 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 APPLY TO YOU.

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



Yes, you can.

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