8 Technical Data

8.1 Technical Description

The Invacare Platinum Mobile uses a molecular sieve and pressure swing adsorption methodology to produce the oxygen gas output. Ambient air enters the device, is filtered and then compressed. This compressed air is then directed into a nitrogen adsorbing sieve bed. Concentrated oxygen exits the opposite end of the sieve bed and is directed into an oxygen reservoir from which it is delivered to the patient.

The oxygen purity level of the output gas ranges from 87% to 95.6%. The oxygen is delivered to the patient through the use of a nasal cannula. A pulse dose delivery method is used. The concentrator detects the start of patient inhalation and delivers a measured pulse of oxygen. No further oxygen is delivered until the next patient inhalation is detected. The volume of oxygen delivered each minute is a fixed amount based on the selected pulse flow setting. The volume of each oxygen pulse will vary with the patient's breath rate such that the fixed minute volume is maintained.

The Invacare Platinum Mobile is capable of operation by the patient in a home, institution, vehicle, or other environments outside the home. Device standard power options include an AC to DC switching power adapter operating from an AC power outlet (100–240VAC, 50–60 Hertz nominal), a DC power cable operating from an accessory outlet typically found in a vehicle type environment (12 VDC nominal), and up to two rechargeable batteries.

No specific product knowledge or training is required to operate the product other than what is contained in this manual.

Service information will be available on request to qualified technical personnel ONLY.

8.2 Specifications

Specifications for Optimal Performance

Operating Temperature:	41°F to 95°F (5°C to 35°C)
Relative Humidity:	15% to 60%
Transport/Storage Temperature:	-13°F to 122°F (-25°C to 50°C) Allow unit to warm, or cool, to operating temperature range before using.
Electrical:	Do not use an extension cord.
Altitude:	Up to 10,000 ft (3048 m) above sea level.
Tubing and Cannula:	4 to 7 ft (1.2 to 2.1 m) cannula with crush resistant tubing (DO NOT pinch).
Environment:	Smoke, pollutant and fume free. No confined spaces (example: no closets).
Time of Operation:	Up to 24 hours per day when connected to an external power source.

Full Product Specifications

Electrical Requirements:	AC Power Supply: 110–240 VAC, 50–60 Hz DC Power Supply: 11–16 VDC
Rated Current Input:	5 A at 19 VDC, 10 A at 11–16 VDC
Power Consumption: (Typical)	Pulse Setting: P1 = 18 W P2 = 24 W P3 = 35 W P4 = 45 W ⓘ Data is for concentrator operation only (no battery charging) utilizing an AC power source.
Operating Environmental Conditions: (All power sources)	Operating Temperature: 41°F to 104°F (5°C to 40°C) Relative Humidity: 15–90% non-condensing relative humidity, water vapor pressures up to 1.48 in Hg (50 hPa)
Storage and Transport Temperatures:	-13°F to 140°F (-25°C to 60°C)
Storage and Transport Humidity:	Up to 90% non-condensing relative humidity for temperatures of 41°F to 95°F (5°C to 35°C) Water vapor pressure up to 1.48 in Hg (50 hPa) for temperatures greater than 95°F (35°C)
Operating Altitude:	Up to 10,000 ft (3048 m) above sea level
Operating Atmospheric Pressure:	697–1060 hPa
Oxygen Purity:	87% to 95.6%, at all flow settings and over the rated ranges for ambient temperature, humidity and atmospheric pressure. After initial warm-up period (typically less than 5 minutes)

Conserver Trigger Sensitivity:	≤ 0.18 cmH_2O pressure drop (For all cannula lengths) Factory set—no adjustment, pressure activated Only patient respiratory efforts that achieve the trigger pressure will result in the delivery of an oxygen bolus.		
Conserver Breath Rate Capacity:	15–40 BPM (breaths per minute) without reduction of bolus minute volume		
Maximum Outlet Pressure:	28.5 psig (197 kPa)		
Cannula Requirements:	Length: 4–25 ft (1.2–7.6 m) including all oxygen tubing Tubing: crush-proof, single lumen Adult, standard flow (rated for up to 6 L/min continuous flow) for lengths up to 7 ft) Adult, high flow (rated for up to 15 L/min continuous flow) for lengths greater than 7 ft to 25 ft) Example of Possible Cannula Model: Westmed Inc. Part Number 0194 (4 ft length)		
Battery Specifications (each battery):	Rechargeable lithium-ion, 14.4 V, 5800 mAh, 83.5 Wh, 500 full charge/discharge cycle life		
Battery Shelf Life:	12 months from date of manufacture		
Battery Duration: (Times are approximate)	**Condition**	**One Battery**	**Two Batteries**
	Pulse Setting P1	5 hr 5 min	10 hr 10 min
	Pulse Setting P2	3 hr 30 min	7 hr 0 min
	Pulse Setting P3	2 hr 20 min	4 hr 40 min
	Pulse Setting P4	1 hr 45 min	3 hr 30 min

Battery Charge Time: (Times are approximate)	**Condition**	**One Battery**	**Two Batteries**
	Concentrator On, Pulse Setting P1	2 hr 20 min	4 hr 40 min
	Concentrator On, Pulse Setting P2	2 hr 20 min	4 hr 40 min
	Concentrator On, Pulse Setting P3	2 hr 30 min	5 hr 0 min
	Concentrator On, Pulse Setting P4	3 hr 10 min	6 hr 20 min
	Concentrator Off	2 hr 20 min	4 hr 40 min
Sound Pressure Level:	≤ 40 dBA weighted for flow setting P2 (Tested per ISO 3744:2010 with microphone location as specified in ISO 8359:1996 subclause 4.6) ≤ 65 dBA weighted for flow setting P4 (Tested per ISO 80601–2–69 subclause 201.9.6.2.1.101)		
Sound Power Level:	≤ 65 dBA weighted for flow setting P4 (Tested per ISO 80601–2–69 subclause 201.9.6.2.1.101)		
Audible Signal Sound Pressure Level:	55 dBA +/- 5 dBA		
Dimensions:	9.4 in high x 7.4 in wide x 3.7 in deep (23.9 cm high x 18.8 cm wide x 9.4 cm deep)		
Weight: (Typical)	4.9 lbs (2.18 kg) with single battery and no carry bag • Add 0.75 lbs (0.34 kg) for carry bag • Add 1.0 lbs (0.45 kg) for a second battery		
Shipping Weight: (Typical)	10.5 lbs (4.8 kg)		
Classifications:	Class II Electrical Shock Protection, Type BF Applied Part, Continuous Operation		
Ingress Protection Rating:	Concentrator—IP22 AC Power Adapter—IP21 Battery—Keep Dry		
Applied Parts:	Cannula/Oxygen Tubing, Oxygen Outlet Port, Carry Bag		

Delivered Oxygen Pulse Volumes:

- The nominal pulse volumes published in the following table is in milliliters at STPD (standard temperature and pressure dry) conditions and apply over the rated ranges for ambient temperature, humidity, and atmospheric pressure.
- Maximum variation from nominal: +/- 15%

4 ft to 25 ft Cannula/Oxygen Tubing Lengths						
	Breaths Per Minute					
	15	20	25	30	35	40
Pulse Setting = P1	14.7	11.0	8.8	7.3	6.3	5.5
Pulse Setting = P2	29.3	22.0	17.6	14.7	12.6	11.0
Pulse Setting = P3	44.0	33.0	26.4	22.0	18.9	16.5
Pulse Setting = P4	58.7	44.0	35.2	29.3	25.1	22.0

8.3 Regulatory Listing

ETL certified complying with:	EN/IEC 60601-1; Ed: 3.1 EN/IEC 60601-1-2; Ed: 4 AAMI ES60601–1 (United States) CSA 22.2 No. 60601–1 (Canada) ISO 80601–2–69 ISO 80601–2–67 IEC 60601–1–6 IEC 60601–1–8 IEC 60601–1–11 RTCA DO 160G