Clinical Evidence on Ambulatory Oxygen Systems
FAA approved
Invacare® Homefill® II

- Clinical evidence on refillable oxygen cylinders
Cuvelier A., MUIR J-F, CHAKROUN N, ET AL.  
Refillable oxygen cylinders may be an alternative for ambulatory oxygen therapy in copd  
Chest 2002 vol 122(2) :451-456

LEWARSKI J, MIKUS G, ANDREWS G, CHATBURN R  
A clinical comparison of portable oxygen system: continuous flow compressed gas vs. oxygen concentrator gas delivered with an oxygen conserving device  
Respir care 2003 vol. 48(11) ;111

TURNBULL J, MCDONNELL L, AC DAVIDSON AC  
Patient activity levels and oxygen device preference: a randomized-controlled trial comparing Homefill® refillable cylinders with usual ambulatory device  
Thorax 2012 ;67 (suppl 2) : A 83

Invacare® XPO2

- Clinical evidence on portable oxygen concentrator
COUILLARD A, FORET D, BAREL P, BAJON D  
oxygen therapy by a portable concentrator with a demand valve: a randomized controlled study of its effectiveness in patients with copd  

Invacare® SOLO2®

- Clinical evidence on transportable oxygen concentrator
MELLONI B, SAUDER P, FORET D, COUILLARD A, VEALE D  
Clinical Effectiveness of SOLO2  
Antadir Federation, October 2011
Authors: Cuvelier A, Muir JF, Chakroun N, et al.

Title: Refillable oxygen cylinders may be an alternative for ambulatory oxygen therapy in COPD


Study Aim and design

- This prospective randomized study with a cross-over design aimed to compare the efficacy of continuous-flow oxygen delivered with HomeFill® refilled oxygen cylinders (O₂-HF) and conventional oxygen cylinders (O₂-C).
- Ten (10) patients with stable oxygen-dependent COPD were included and performed three (3) successive 6-min walking test (6MWT). All patients were previously treated with continuous-flow long-term oxygen therapy.
- Each patient performed a baseline reference 6MWT carrying a new O₂-C with nasal prongs, but breathing room air.
- The walking test were performed with O₂-HF or O₂-C in randomized order, and both 6MWT under oxygen were performed with a 2 L/min continuous-flow.
- Transcutaneous SaO₂ and cardiac frequency were recorded, and dyspnea was measured at rest and after exercise with a Borg scale.
- Both O₂-HF and O₂-C oxygen purity were measured regularly with an oxygen sensor.

Key findings

- Mean SaO₂ values with O₂-C and O₂-HF were very similar through the walking test.
- Mean cardiac frequencies were very similar under each condition. No significant individual cardiac intolerance was observed.
- Mean dyspnea score, measured with the Borg scale, did not significantly change after the walking test and were not significantly different with either O₂-C or O₂-HF.
- Clinical improvement was significant with both O₂-HF or O₂-C, in a real-life situation like an exercise test.
- The study concluded that clinically efficacy of continuous-flow oxygen from refilled oxygen cylinders (O₂-HF) is equivalent to continuous-flow oxygen from conventional cylinders (O₂-C).

Key quotes

- “SaO₂ improvement are equivalent with both oxygen supplies and demonstrate a similar performance between O₂-HF and O₂-C”
- “Noteworthy, these results were obtained in spite of a lower filling gas pressure and a slightly lower oxygen purity in O₂-HF (140 bars and 94.24 +/- 2.56%) as compared to O₂-C (200 bars and 98.85 +/- 4.89%).”
- “The actual average FIO₂ received by the patients does not differ significantly when considering the entraining room air via the Venturi effect.”
- “We suggest that performances (mean distances, dyspnea score) achieved through the walking tests are similar with both oxygen devices.”
- “Substitution of gaseous oxygen by liquid oxygen therapy for all hypoxemic COPD patients is not medically justified, and is not largely available in most countries for economic reasons.”
- “O₂-HFs may be a good compromise at home, since ambulatory patients will be able to manage their physical autonomy without the constraints of oxygen home delivery and with overall decreasing costs.”
Authors: Cuvelier A, Muir JF, Chakroun N, et al.

Title: Refillable oxygen cylinders may be an alternative for ambulatory oxygen therapy in COPD


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• Each patient performed a baseline reference 6MWT carrying a new O₂-C with nasal prongs, but breathing room air.

• The walking test were performed with O₂-HF or O₂-C in randomized order, and both 6MWT under oxygen were performed with a 2 L/min.

• Transcutaneous SaO₂ and cardiac frequency were recorded, and dyspnea was measured at rest and after exercise with a Borg scale.

• Both O₂-HF and O₂-C oxygen purity were measured regularly with an oxygen sensor.

• Mean SaO₂ values with O₂-C and O₂-HF were very similar through the walking test.

• Mean cardiac frequencies were very similar under each condition. No significant individual cardiac intolerance was observed.

• “SaO₂ improvement are equivalent with both oxygen supplies and demonstrate a similar performance between O₂-HF and O₂-C.”

• “Noteworthy, these results were obtained in spite of a lower filling gas pressure and a slightly lower oxygen purity in O₂-HF (140 bars and 94.24 +/- 2.56%) as compared to O₂-C (200 bars and 98.85 +/- 4.89%).”

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• “O₂-HFs may be a good compromise at home, since ambulatory patients will be able to manage their physical autonomy without the constraints of oxygen home delivery and with overall decreasing costs.”

• Mean dyspnea score, measured with the Borg scale, did not significantly change after the walking test and were not significantly different with either O₂-C or O₂-HF.

• Clinical improvement was significant with both O₂-HF or O₂-C, in a real-life situation like an exercise test.

• The study concluded that clinically efficacy of continuous-flow oxygen from refilled oxygen cylinders (O₂-HF) is equivalent to continuous-flow oxygen from conventional cylinders (O₂-C).

Key illustrations

Figure 1: Borg Scale
Mean dyspnea scores after walking test in room air were not significantly different from O₂-C and O₂-HF. Scores of Patient 1 to 10 shown in Figure 1.

Figure 2: Distances (m)
Mean walking distance significantly increased with both O₂-C and O₂-HF, and no statistical difference was found between the two groups.
Study Aim and design

- This prospective randomized study with a cross-over design aimed to compare clinical efficacy of conventional gas continuous-flow oxygen cylinders (O2-C) and HomeFill® refilled pulsed-flow oxygen cylinders (O2-HF).

- Nine (9) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned to continuous-flow oxygen with O2-C (99.6% USP*) or pulsed-flow O2-HF (93% USP) delivery system.

- All patients were existing home oxygen users, with an O2 prescription of 3LPM or less and had the ability to carry portable devices. Oxygen litre flow (lpm) and settings were consistent with their current prescription.

- A standard 6-minute walking test (6MWT) was used to assess exercise capacity and tolerance.

- Distance walked (m), heart rate (rpm), pulse oximetry arterial oxygen saturation (SpO2) and dyspnea (Borg scale) were recorded before and after the 6MWT to evaluate the clinical response to each system.

Key findings

- The study concluded that clinically efficacy of pulse-dose oxygen from refilled oxygen cylinders (O2-HF) is equivalent to continuous-flow oxygen from conventional cylinders (O2-C).

- The modest difference in the delivered oxygen purity between O2-HF (93%) and O2-C (99.6%) does not affect clinical outcomes.

- There was no effect of device on either SpO2 or heart rate, and there was no difference in Borg score between the two groups.

Key quotes

- “These results suggest that the type of oxygen delivery device used and the modest difference in the delivered oxygen percentage does not affect clinical outcomes.”

- “Compressed oxygen derived from a concentrator at 93% O2 and delivered in conjunction with a pneumatic O2-conserving device provides the same clinical benefit as the standard 99.6% O2 continuous flow device.”

- “Practical benefits of a transfilling oxygen concentrator system include patient freedom to refill their compressed gas cylinders at their own schedule, leading to improved portability.”

- “The use of refilled oxygen cylinders (O2-HF) in stable ambulatory users appears to be a safe and reliable alternative to traditional compressed oxygen gas (O2-C).”

*United States Pharmacopeial Convention (USP)
Authors: Lewarski, J, Mikus, G, Andrews, G, Chatburn, R.

Title: A clinical comparison of portable oxygen system: Continuous flow compressed gas vs. oxygen concentrator gas delivered with an oxygen conserving device

Source: Study Aim and design

Respir Care 2003 Vol. 48(11); 1115

• This prospective randomized study with a cross-over design aimed to compare clinical efficacy of conventional gas continuous-flow oxygen cylinders (O2-C) and HomeFill® refilled pulsed-flow oxygen cylinders (O2-HF)

• Nine (9) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned to continuous-flow oxygen with O2-C (99.6% USP*) or pulsed-flow O2-HF (93% USP)

• All patients were existing home oxygen users, with an O2 prescription of 3LPM or less and had the ability to carry portable devices. Oxygen litre flow (lpm) and settings were consistent with their current prescription

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• Distance walked (m), heart rate (rpm), pulse oxymetry arterial oxygen saturation (SpO2) and dyspnea (Borg scale) were recorded before and after the 6MWT to evaluate the clinical response to each system

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• “The use of refilled oxygen cylinders (O2-HF) in stable ambulatory users appears to be a safe and reliable alternative to traditional compressed oxygen gas (O2-C)”

Source Data

CLINICAL EVIDENCE ON REFILLABLE OXYGEN CYLINDERS

Figure 1

SpO2

before 6MWT
after 6MWT

0%
80%
85%
90%
95%
100%

O2-C 99,6% continuous
O2-HF 93% pulsed

97%
90%
96%
88%

Figure 2

Heart rate

before 6MWT
after 6MWT

0
20
40
60
80
100
120

O2-C 99,6% continuous
O2-HF 93% pulsed

81
112
83
115

Figure 3

Borg scale

before 6MWT
after 6MWT

0
1
2
3
10

O2-C 99,6% continuous
O2-HF 93% pulsed

0,9
3,0
1,2
2,9

Figure 1, 2 and 3: The modest difference in the delivered oxygen purity does not affect clinical outcomes
**Authors:** Turnbull J, L McDonnell, AC Davidson

**Title:** PATIENT ACTIVITY LEVELS AND OXYGEN DEVICE PREFERENCE: AN RCT COMPARING HOMEFILL® REFILLABLE CYLINDERS WITH USUAL AMBULATORY DEVICE

**Source:** Thorax 2012;67(Suppl 2):A83

**Study Aim and design**

- This prospective randomized study with a cross-over design aimed to assess patients activity and preference using HomeFill® versus usual ambulatory oxygen device in a mixed population of patients with exercise hypoxaemia and/or Long-term Oxygen Therapy (LTOT)

- Twenty-nine (29) patients with stable oxygen-dependent COPD were included and randomized in cross-over design. In Cohort A, patients received 6 weeks ambulatory oxygen HomeFill® and then 6 weeks their usual ambulatory oxygen device, and vice versa in Cohort B

- All patients were previously treated with ambulatory long-term oxygen therapy and ambulatory oxygen was optimized at baseline

- Weekly calls encouraging activity and ambulatory oxygen use were made. Tri-axial accelerometers were used during the last week to measure mean daily activity count (steps)

- Patient preference was identified by questionnaire

**Key findings**

- There was no statistically significant difference in mean daily activity counts when using HomeFill® compared to usual ambulatory oxygen (95% CI, p= 0.85)

- HomeFill® allows patients to refill oxygen cylinders as needed using a compressor at home and frees them from liquid or gaseous oxygen delivery

- Patient’s preference and utilization of ambulatory oxygen includes non-clinical aspects, like greater independence

- Prescription of ambulatory oxygen should be considered at an earlier stage of COPD

**Key quotes**

- “HomeFill® was equivalent to usual provision of ambulatory oxygen and was preferred by the majority of patients.”

- “Eighteen (18) patients (62%) elected to keep HomeFill®, of whom 11 previously used LOX as their usual ambulatory oxygen, mostly because of freedom from deliveries”

- “HomeFill® is equivalent to usual ambulatory oxygen in alleviating exercise hypoxaemia”

- “Prescription of ambulatory oxygen should be considered at an earlier stage before severe deconditioning”

- “I really like the fact that you can refill the cylinders at your leisure and don’t have to worry about deliveries” a patient commented
This prospective randomized study with a cross-over design aimed to assess patients’ activity and preference using HomeFill® versus usual ambulatory oxygen device in a mixed population of patients with exercise hypoxaemia and/or Long-term Oxygen Therapy (LTOT).

Twenty-nine (29) patients with stable oxygen-dependent COPD were included and randomized in cross-over design. In Cohort A, patients received 6 weeks ambulatory oxygen HomeFill® and then 6 weeks their usual ambulatory oxygen device, and vice versa in Cohort B.

All patients were previously treated with ambulatory long-term oxygen therapy and ambulatory oxygen was optimized at baseline.

Weekly calls encouraging activity and ambulatory oxygen use were made. Tri-axial accelerometers were used during the last week to measure mean daily activity count (steps).

Patient preference was identified by questionnaire.

There was no statistically significant difference in mean daily activity counts when using HomeFill® compared to usual ambulatory oxygen (95% CI, p = 0.85).

HomeFill® allows patients to refill oxygen cylinders as needed using a compressor at home and frees them from liquid or gaseous oxygen delivery.

Patient’s preference and utilization of ambulatory oxygen includes non-clinical aspects, like greater independence.

Prescription of ambulatory oxygen should be considered at an earlier stage of COPD.

“HomeFill® was equivalent to usual provision of ambulatory oxygen and was preferred by the majority of patients.”

Eighteen (18) patients (62%) elected to keep HomeFill®, mostly because of freedom from deliveries.

“HomeFill® is equivalent to usual ambulatory oxygen in alleviating exercise hypoxaemia.”

“Prescription of ambulatory oxygen should be considered at an earlier stage before severe deconditioning.”

“I really like the fact that you can refill the cylinders at your leisure and don’t have to worry about deliveries,” a patient commented.

**Figure 1** Patient’s ambulatory oxygen devices use, before and after study completion. Eighteen (18) patients elected to keep HomeFill®, mostly because of freedom from deliveries.

**Figure 2** No statistically significant difference in mean daily activity count was found between the two groups (CI=95%, p = 0.85).

**Mean Daily Activity Counts (steps)**

<table>
<thead>
<tr>
<th></th>
<th>Trial arm 1</th>
<th>Trial arm 2</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=13</td>
<td>22,478</td>
<td>17,124</td>
<td>+ 5,354</td>
</tr>
<tr>
<td></td>
<td>(20,112)</td>
<td>(13,627)</td>
<td></td>
</tr>
<tr>
<td>Cohort B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N=16</td>
<td>41,788</td>
<td>36,740</td>
<td>- 5,049</td>
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<tr>
<td></td>
<td>(28,906)</td>
<td>(30,373)</td>
<td></td>
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</tbody>
</table>
Source Data

Authors: Couillard A, Foret D, Barel P, Bajon D

Title: Oxygen therapy by a portable concentrator with a demand valve: a randomised controlled study of its effectiveness in patients with COPD


Study Aim and design

- This prospective randomized study aimed to compare clinical efficacy of XPO2 pulse-dose portable concentrator (O2-P) with traditional continuous-flow liquid oxygen (O2-L)

- Nineteen (19) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned on pulse-dose portable concentrator (O2-P) or continuous-flow liquid oxygen C1000 (O2-L)

- All patients were existing home oxygen users with an O2 prescription at rest or deambulation, and had the ability to carry portable devices

- Patients were assessed for exercise capacity, dyspnea and SaO2 at rest and during exercise

- A standard 6-minute walk test (6MWT) was used, and each patient underwent it with the selected delivery system. After 1 hour rest, the 6MWT was repeated with the other oxygen device

Key findings

- This non-inferiority clinical trial on nineteen (19) patients demonstrated that the clinical benefits of pulse-dose portable concentrator (O2-P) are similar to traditional continuous-flow liquid oxygen (O2-L)

- The portable oxygen concentrator (O2-P) allowed sustained mobility and ambulation without increased dyspnea compared to O2-L, with the independence of not relying on oxygen delivery

- The decrease in SaO2 during the 6MWT were identical for O2-P and O2-L, as demonstrated in previously published clinical literature

- There was no statistically significant difference between SaO2 at rest and after the 6MWT obtained while using O2-P and O2-L

- Exercise capacity, dyspnea and SaO2 at rest and during exercise in patients using this pulse-dose portable concentrator were similar to those using continuous-flow portable liquid oxygen device

Key quotes

- “This study demonstrates that clinical efficacy of a pulse-dose portable concentrator (O2-P) is identical to continuous-flow portable liquid oxygen device (O2-L)”

- “Improvements in patients independence with XPO2 pulse-dose portable concentrator are similar to those observed with continuous-flow portable liquid oxygen device, and could reduce the cost of oxygen therapy”

- “When patients carried the device on the shoulder, the portable oxygen concentrators was considered lighter and more practical, especially when compared with a fully loaded O2-L device”
This prospective randomized study aimed to compare clinical efficacy of XPO2 pulse-dose portable concentrator (O2-P) with traditional continuous-flow liquid oxygen (O2-L).

Nineteen (19) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned on pulse-dose portable concentrator (O2-P) or continuous-flow liquid oxygen C1000 (O2-L).

All patients were existing home oxygen users with an O2 prescription at rest or deambulation, and had the ability to carry portable devices.

Patients were assessed for exercise capacity, dyspnea and SaO2 at rest and during exercise. A standard 6-minute walk test (6MWT) was used, and each patient underwent it with the selected delivery system. After 1 hour rest, the 6MWT was repeated with the other oxygen device.

This non-inferiority clinical trial on nineteen (19) patients demonstrated that the clinical benefits of pulse-dose portable concentrator (O2-P) are similar to traditional continuous-flow liquid oxygen (O2-L).

"This study demonstrates that clinical efficacy of a pulse-dose portable concentrator (O2-P) is identical to continuous-flow portable liquid oxygen device (O2-L)."

"Improvements in patients independence with XPO2 pulse-dose portable concentrator are similar to those observed with continuous-flow portable liquid oxygen device, and could reduce the cost of oxygen therapy."

When patients carried the device on the shoulder, the portable oxygen concentrator was considered lighter and more practical, especially when compared with a fully loaded O2-L device.

The portable oxygen concentrator (O2-P) allowed sustained mobility and ambulation without increased dyspnea compared to O2-L, with the independence of not relying on oxygen delivery.

The decrease in SaO2 during the 6MWT were identical for O2-P and O2-L, as demonstrated in previously published clinical literature.

There was no statistically significant difference between SaO2 at rest and after the 6MWT obtained while using O2-P and O2-L.

Exercise capacity, dyspnea and SaO2 at rest and during exercise in patients using this pulse-dose portable concentrator were similar to those using continuous-flow portable liquid oxygen device.

**Figure 1** There was no statistically significant difference between exercise capacity of the O2-P and the O2-L group.

**Figure 2** The SaO2 during the 6-minutes walking test was very similar in the O2-P and O2-L group.
Clinical Effectiveness of SOLO₂

Authors: MELLONI B, SAUDER P, FORET D, COUILLARD A, VEALE D

Title: Clinical Effectiveness of SOLO₂

Source: Antadir Federation, October 2011

Study Aim and design

- This prospective randomized study with cross-over design aimed to compare clinical efficacy of SOLO₂ transportable concentrator on pulse-dose (O₂-TP) with traditional continuous-flow liquid oxygen C1000 (O₂-L).

- Twenty-one (21) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned to pulse-dose transportable concentrator (O₂-TP) or continuous-flow liquid oxygen transportable device (O₂-L).

- All patients (14 men, 7 women) were existing home oxygen users with an O₂ prescription at rest or deambulation, and had the ability to carry a transportable device.

- Patients were assessed for exercise capacity, dyspnea (VAS*) and SaO₂ at rest and during exercise.

- A standard 6-minute walk test (6MWT) was used, and each patient underwent two consecutive 6MWT: the first 6MWT with the randomly selected device, and after 1 hour rest, the 6MWT was repeated with the other transportable oxygen device.

*visual analogue scale

Key findings

- This non-inferiority clinical trial on twenty-one (21) patients demonstrated that the clinical benefits of pulse-dose transportable concentrator (O₂-TP) are similar to traditional continuous-flow liquid oxygen (O₂-L).

- Exercise capacity and dyspnea at rest and during exercise in patients using SOLO₂ on pulse mode were similar to those using continuous-flow liquid oxygen device.

- The decrease in SaO₂ during the 6MWT were identical for O₂-P and O₂-L, as demonstrated in previously published clinical literature.

Key quotes

- “SOLO₂ used in pulse-dose demonstrated a clinical efficacy equivalent to the C1000 device for exercise capacity, symptoms and arterial oxygen saturation at rest and during the 6MWT.”

- “Patients appreciated the greater independence associated with the concentrator technology which frees them from the constraints deliveries and enables them increased in daily activities (longer travels, etc...).”
This prospective randomized study with cross-over design aimed to compare clinical efficacy of SOLO\textsubscript{2} transportable concentrator on pulse-dose (O\textsubscript{2}-TP) with traditional continuous-flow liquid oxygen C1000 (O\textsubscript{2}-L).

Twenty-one (21) patients with stable, uncomplicated oxygen-dependent COPD were randomly assigned to pulse-dose transportable concentrator (O\textsubscript{2}-TP) or continuous-flow liquid oxygen transportable device (O\textsubscript{2}-L).

All patients (14 men, 7 women) were existing home oxygen users with an O\textsubscript{2} prescription at rest or deambulation, and had the ability to carry a transportable device.

Patients were assessed for exercise capacity, dyspnea (VAS*) and SaO\textsubscript{2} at rest and during exercise.

A standard 6-minute walk test (6MWT) was used, and each patient underwent two consecutive 6MWT: the first 6MWT with the randomly selected device, and after 1 hour rest, the 6MWT was repeated with the other transportable oxygen device.*visual analogue scale

This non-inferiority clinical trial on twenty-one (21) patients demonstrated that the clinical benefits of pulse-dose transportable concentrator (O\textsubscript{2}-TP) are similar to traditional continuous-flow liquid oxygen (O\textsubscript{2}-L).

Exercise capacity and dyspnea at rest and during exercise in patients using SOLO\textsubscript{2} on pulse mode were similar to those using continuous-flow liquid oxygen device.

The decrease in SaO\textsubscript{2} during the 6MWT were identical for O\textsubscript{2}-P and O\textsubscript{2}-L, as demonstrated in previously published clinical literature.

“SOLO\textsubscript{2} used in pulse-dose demonstrated a clinical efficacy equivalent to the C1000 device for exercise capacity, symptoms and arterial oxygen saturation at rest and during the 6MWT.”

“Patients appreciated the greater independence associated with the concentrator technology which frees them from the constraints of deliveries and enables them increased in daily activities (longer travels, etc…).”

**Figure 1** There was no statistically significant difference in dyspnea change between the SOLO\textsubscript{2} pulse-dose and the Liquid O\textsubscript{2} continuous-flow group.

**Figure 2** The SaO\textsubscript{2} during the 6-minutes walking test was very similar in the SOLO\textsubscript{2} pulse-dose and Liquid O\textsubscript{2} continuous-flow group.
- Pulse dose settings 1-5 meet a broad range of patients needs
- Lightweight: 2.9 kg (3.6 with cart)
- Small compact design: H 25 cm x L 18 cm x P 10 cm
- Sound level: 44 dB (@ setting 2)
- Oxygen concentration: 87-95.6%
- Trigger sensitivity: 0.20 cm H₂O
- Recharge time: 3 hrs (can be used during recharging)
- Supplemental Battery pack allows extended battery power, with AC and DC recharger
- Electrical consumption: 60 W max.
- FAA approved

### Average Pulse Volume @20 BPM

<table>
<thead>
<tr>
<th>Setting</th>
<th>@20 BPM</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>15 ml</td>
</tr>
<tr>
<td>2</td>
<td>23 ml</td>
</tr>
<tr>
<td>3</td>
<td>31 ml</td>
</tr>
<tr>
<td>4</td>
<td>37 ml</td>
</tr>
<tr>
<td>5</td>
<td>42 ml</td>
</tr>
</tbody>
</table>

### Invacare XPO₂

- Continuous flow up to 3 LPM and Pulse dose settings 1-5 meet a broad range of patients needs
- Transportable: 9 kg (9.7 with cart)
- Small compact design: H 42 cm x L 28 cm x P 20 cm
- Sound level: 39 dB (@ 2 LPM)
- Oxygen concentration: 87-95.6%
- Trigger sensitivity 0.20 cm H₂O
- Recharge time: 4.5 hrs (can be used during recharging)
- Wheeled cart included with every SOLO₂ concentrator kit
- Battery, AC or DC operation for patient convenience
- Electrical consumption: 135 W max. (@ 3 LPM)
- FAA approved

### Average Pulse Volume @20 BPM

<table>
<thead>
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<th>@20 BPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18 ml</td>
</tr>
<tr>
<td>2</td>
<td>36 ml</td>
</tr>
<tr>
<td>3</td>
<td>54 ml</td>
</tr>
<tr>
<td>4</td>
<td>72 ml</td>
</tr>
<tr>
<td>5</td>
<td>90 ml</td>
</tr>
</tbody>
</table>
• Provides an unlimited refillable ambulatory oxygen supply
• Continuous flow up to 6 LPM and Pulse dose settings 1-5 meet a broad range of patients needs
• Lightweight cylinders: 1.6 kg (1 L) or 2.2 kg (1.7 L)
• Small compact cylinders: D 11 cm x H 30 cm (1 L) or H 35.5 cm (1.7 L)
• Oxygen concentration: 93% +/- 3%
• Cylinders Fill time: 1 hrs (1 L) or 2hrs (1.7 L)
• Easy cylinder connection with the HomeFill II compressor Coupler
• Electrical consumption: 175 W max.
• Patients breathes from a continuous flow oxygen concentrator at night
• Compatible with PerfectO₂, PerfectO₂ V and Platinum® 9

Invacare® PerfectO₂

• Continuous flow up to 5 LPM meet a broad range of patients needs
• Compatible with HomeFill II compressor
• Top handle for ease of mobility
• Self-diagnostic electronics minimise troubleshooting time, including alarms and safety systems
• Simplified preventative maintenance schedule: Replace preventative maintenance components as needed
The Invacare® Ambulatory Oxygen Systems

- Unlimited oxygen supply
  A choice of ambulatory systems enabling an unlimited oxygen supply
- Compliance
  Ambulatory oxygen systems encourage patients to be more compliant with their oxygen therapy
- Ambulation
  Small portable systems allow greater mobility than other traditional oxygen modalities
- Independence
  No oxygen deliveries means increased independence for ambulatory oxygen patients
- Proven track record
  Over 10 years experience from the world leader in oxygen, with more than 1 000 000 ambulatory patients treated worldwide

Making Life’s Experiences Possible™