October 2005

Product Comparison

Oxygen Concentrators

UMDNS information

This Product Comparison covers the following device term and product code as listed in ECRI's Universal Medical Device Nomenclature System™ (UMDNS™):

- ✓ Oxygen Concentrators [12-873]

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October 2005

Oxygen Concentrators

Scope of this Product Comparison

This Product Comparison covers single-patient, molecular-sieve-type oxygen concentrators prescribed by physicians and pulmonologists. Membrane-type oxygen concentrators are not included in this report.

These devices are also called: oxygen enrichers.

Purpose

Oxygen concentrators produce an oxygen-rich gas mixture by drawing in room air and extracting nitrogen. Normal room air consists of 78% nitrogen, 21% oxygen, and trace amounts of other gases. However, many patients with respiratory difficulties (e.g., severe chronic hypoxemia, pulmonary edema, chronic obstructive pulmonary disease) benefit from higher oxygen concentrations.

Oxygen concentrators are typically used as stationary sources to provide long-term oxygen therapy (LTOT) to patients at home. In addition, oxygen concentrators are sometimes used in hospitals or nursing homes as an economical method of delivering low-flow, low-pressure oxygen when built-in oxygen systems are not required or available. (Liquid oxygen and compressed oxygen are other forms of portable oxygen available for home use.)

Principles of operation

The most common oxygen concentrators incorporate molecular sieves that operate in a two-part cycle: a high-pressure intake phase followed by a depressurizing exhaust phase. These types of units have two cylinders containing zeolite, a nitrogen adsorbent silicate substance that acts as the sieve material.

The concentrator draws in room air and passes it through a series of filters that remove dust, bacteria, and other particulates. In the first step of the concentration process, a compressor forces the air into one of the two cylinders containing the sieve material, where nitrogen is adsorbed, leaving concentrated oxygen and a small percentage of other gases found in room air. Simultaneously, in the other cylinder, nitrogen is desorbed and exhausted into the atmosphere. In the second step, the function of the cylinders is reversed in a timed cycle, providing a continuous flow of oxygen to the patient (see Fig. 1).

The oxygen concentration produced by molecular-sieve concentrators varies inversely with the flow of gas through the cylinders: the lower the flow, the higher the oxygen concentration in the end-product gas. The operator can adjust the flow from 0 to 12 liters per minute (L/min), depending on the concentrator model; most units for single-patient use deliver 0-5 L/min for oxygen therapy. The final oxygen concentration achieved can vary from up to 95% at 1 to 4 L/min to 85% at 6 L/min. The most common flow setting is 2 L/min.

Patients usually receive oxygen through a nasal cannula. In some instances, a face mask may be substituted. Suppliers of molecular-sieve concentrators provide for the attachment of an in-line humidifier to humidify the gas mixture delivered to the patient.

Oxygen concentration status indicators (OCSIs) are currently the only reliable method of detecting low oxygen output. OCSIs monitor the amount of oxygen produced by the concentrator and indicate when the oxygen output is below the therapeutic range. Most manufacturers offer in-line

OCSIs as accessories to measure the percentage of oxygen delivered; add-on OCSIs are available for all concentrators. Several concentrators have built-in alarm systems to warn of power interruptions, dirty filters, pressure fluctuations, and other system failures. Oxygen concentrators also include an hour meter, which shows how many hours the concentrator has been operating.

Reported problems

Oxygen concentrators may fail to produce therapeutic levels of oxygen because of common problems involving the air-intake system, malfunctioning sieve-control valves, and contaminated sieve materials. The majority of air drawn into a concentrator is used to cool the unit; therefore, if the intake of air is obstructed and the internal airflow is altered, internal temperature will rise, which can decrease performance. This problem can be caused by a clogged intake filter or obstruction of the cabinet intake by drapes or other objects.

If a sieve-bed control valve becomes stuck in one position, all the input air will be continually routed through only one of the sieve beds, and effective purging cannot take place. The output gas from that bed becomes room air (only 21% oxygen) and is still delivered to the patient at the set flow rate. Another problem that occurs in sieve beds is zeolite contamination. Zeolite adsorbs water preferentially over nitrogen. Water vapor in room air can compromise the adsorption of nitrogen in the sieve beds by entering through small leaks in the internal tubing; once again, the gas delivered will be room air.

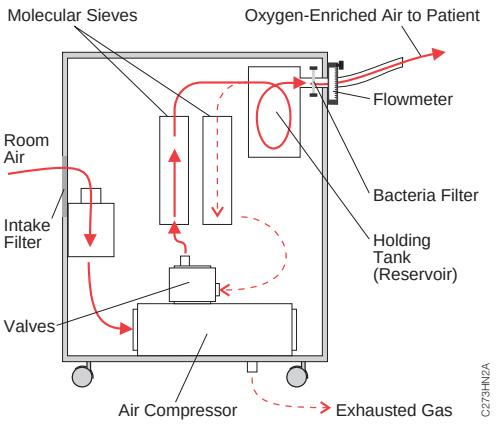

Figure 1. The molecular sieve concentrator showing flow of room air and oxygen-enriched air

Patients may be unaware of these decreases in oxygen output because the immediate physiologic effects of low-grade hypoxemia are mild; furthermore, the machine may appear to be functioning properly and to be delivering the required oxygen flow. Therefore, OCSIs are required to warn of a decreased oxygen output, as set out in ASTM International standards (see *Standards and Guidelines* below).

Both educational and service support are very important for the safe operation of oxygen concentrators in the home; suppliers often provide 24-hour hotline numbers. Oxygen concentrators require regular maintenance by the patient or caregiver, including cleaning the intake filter and humidifier and changing the humidifier water daily or several times a week. Major compressor service may be required every one to three years, depending on device usage. Usually, the service provider will send a representative monthly or bimonthly to verify concentrator performance and perform maintenance when required. ECRI provides a checklist of inspection, preventive maintenance, and acceptance testing procedures for oxygen concentrators (see the *Health Devices* citation below).

Because excess oxygen enhances and accelerates combustion, extreme care must be taken to avoid using the concentrator near combustible materials and sources of ignition; locations where the unit can be safely used should be described to the patient. Smoking while using a concentrator or while in the vicinity of the unit has caused patient injuries.

A reserve compressed-oxygen tank and regulator should always be available because a power failure will cause an immediate loss of oxygen. Some models have a built-in high-pressure-release valve to guard against the risk of internal pressure buildup.

Patients using oxygen concentrators may suffer irritation from nasal cannulae. LTOT patients are susceptible to serious respiratory infections secondary to their condition, and subsequent hospitalization may be necessary.

Purchase considerations

ECRI recommendations

Included in the accompanying comparison chart are ECRI's recommendations for minimum performance requirements for oxygen concentrators.

The concentrator should deliver an oxygen concentration of at least 90% over the full range of flow settings. The flow setting should be at least 3 L/min. The device must have an OCSI to alert the user if the unit's product gas has a low oxygen concentration; the OCSI should warn of concentrations below 85% and should have both an audible alarm and a visual indicator. The OCSI may be either a built-in component or an add-on accessory.

Alarms should be initiated for high and low pressures, battery- or line-power failures, low oxygen purity, and occlusions. Each unit should be provided with a detailed service manual.

Cabinetry, mobility options (e.g., casters, handles), and accessories should be selected by the user.

Other considerations

Oxygen concentrators are ideally suited for long-term, low-flow use and offer an unlimited supply compared to oxygen cylinders and liquid-oxygen systems, which rely on dealer deliveries of oxygen. Units used in the home should meet electrical safety standards. Suppliers should also provide routine inspection and preventive maintenance (e.g., filter replacement). Tubing length should allow for freedom of movement, and the concentrator should be light enough to permit a patient to move it, if necessary.

Cost containment

A life-cycle cost (LCC) analysis can be used to compare high-cost alternatives and/or to determine the positive or negative economic value of a single alternative. For example, hospitals can use LCC analysis techniques to examine the cost-effectiveness of leasing or renting equipment versus purchasing the equipment outright. Because it examines the cash-flow impact of initial acquisition costs and operating costs over a period of time, LCC analysis is most useful for comparing alternatives with different cash flows and for revealing the total costs of equipment ownership. One LCC technique — present value (PV) analysis — is especially useful because it accounts for inflation and for the time value of money (i.e., money received today is worth more than money received at a later date). Conducting a PV/LCC analysis often demonstrates that the cost of ownership includes more than just the initial acquisition cost and that a small increase in initial acquisition cost may produce significant savings in operating costs. The PV is calculated using the annual cash flow, the dollar discount factor, and the lifetime of the equipment (in years) in a mathematical equation.

The following represents a sample seven-year PV/LCC analysis for an oxygen concentrator with an OCSI.

Present Value/Life-Cycle Cost Analysis

Assumptions

- Dollar discount factor is 6.5%
- Inflation rate is 4% for disposables
- Operating and ownership costs are based on 1 unit being used 24 hours/day
- Maintenance costs are based on a $50/hour labor cost

Capital Costs

- Concentrator with OCSI = $1,150

Total Capital Costs = $1,150

Operating Costs

- Electricity per year = $360
- Compressor maintenance in year 2 = $150
- General maintenance (e.g., filter replacement, nasal cannula) per year = $225
- Oxygen monitor fuel-cell replacement in year 3 = $42
- Sieve-bed maintenance/replacement in years 2, 4, and 6 = $120

Total Operating Costs = $585 in years 1, 5, and 7; $855 in year 2; $627 in year 3; $705 in years 4 and 6

PV = ($5,601)

As illustrated by the above sample PV/LCC analysis, the initial acquisition cost is only a fraction of the total cost of operation over seven years. Although Medicare reimburses U.S. users of oxygen therapy equipment such as oxygen concentrators at a fixed amount per month, electricity costs for these units are considerable and are not subsidized by Medicare or other health insurance programs. Therefore, before making a purchase decision based solely on the acquisition cost of an oxygen concentrator, buyers should consider operating costs over the lifetime of the equipment.

For further information on PV/LCC analysis, customized analyses, and purchase decision support, readers should contact ECRI's SELECT™ Group.

Studies (Dobson 1991; Dobson et al. 1996) have been conducted on the cost-effectiveness of using oxygen concentrators as a primary oxygen supply in developing countries. In many developing countries, where oxygen is supplied in cylinders, oxygen concentrators could reduce the cost of oxygen supplies by 25% to 75%. In particular, countries that import oxygen cylinders could achieve significant cost savings by using oxygen concentrators. For a hospital in a developing country to successfully implement oxygen concentrator use, there must be a reliable, continuous supply of electric power; the devices must be properly installed in the hospital; a team of technicians must be trained to install, inspect, service, and repair the concentrators; and hospital staff must be given clear guidelines on patient selection and proper device use. In addition, oxygen cylinders should be readily available to provide oxygen if the concentrators fail.

Stage of development

Oxygen concentrators were introduced in the late 1960s. Since then, they have become more compact and efficient. One manufacturer offers a unit that can be adapted for battery power with an AC/DC converter, making it convenient to transport and operate from a car battery. Fully battery-powered units are under development but are heavier and have not proven to be cost-effective.

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Standards and guidelines

Note: *Although every effort is made to ensure that the following list is comprehensive, please note that other applicable standards may exist.*

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Oxygen concentrators [evaluation update]. 1993 Dec; 22(12):566-9.

Oxygen concentrators [IPM procedure]. 1996 Sep; 25(9):338-42.

Health Devices Alerts

This Product Comparison lists *Health Devices Alerts (HDA)* citations published since the last update of this report. Each *HDA* abstract is identified by an Accession Number. Recalls and hazard reports include descriptions of the problem involved; abstracts of other published articles are referenced by bibliographic information. *HPCS* subscribers can call the Hotline for additional information on any of these citations or to request more extensive searches of the HDA database.

A4871 FDA has designated Class II Recall Nos. Z-0198/0201-2 certain Invacare oxygen concentrators. A faulty capacitor in the units may overheat, causing the concentrator cabinet base to melt and creating a potential fire hazard. The distributor initiated a recall by letter dated September 7, 2001. Verify that you have received the September 7, 2001, letter, concentrator product tracking report, capacitor/compressor kit sales report, and capacitor replacement kit order form from Invacare. Identify, isolate, and discard any affected capacitors in your inventory. All capacitors should have been replaced by August 31, 2002. If your capacitors have not yet been replaced, contact Invacare immediately to arrange for service. **Source:** *FDA Enforcement Rep* 2002 May 8; *FDA Enforcement Rep* 2001 Oct 31; Distributor.

Healthcare Risk Control

Medical gas and vacuum systems [risk analysis]. 1996;3:Environmental issues 17:1-18.

Supplier information

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About the chart specifications

The following terms are used in the chart:

Outlet pressure, psig: The pressure of the oxygen available at the outlet to the nasal cannula, expressed in pounds per square inch gauge.

Sound level, dBA: A scale tested according to ASTM standard F1464-93, which states that the steady sound pressure level at the front of oxygen concentrators shall not exceed 60 decibels on the A

scale (dBA) and that the rating for each unit's sound level shall be indicated by the manufacturer. The dBA scale is a frequency-weighted scale that corresponds to the level of sound as it affects the human ear.

Abbreviations:

The following abbreviations are used in the chart:

ABS — Acrylonitrile-butadiene-styrene, a shock-resistant plastic

ANSI — American National Standards Institute

CE — Communaute Europeen

CE mark — Conformite Europeene mark

CSA — Canadian Standards Association

ETL — ETL Testing Laboratories

FDA — U.S. Food and Drug Administration

HEPA — High-efficiency particulate-air

IEC — International Electrotechnical Commission

ISO — International Organization for Stan dardization

LCD — Liquid crystal display

MDD — Medical Devices Directive

OCSI — Oxygen concentration status indicator

OSD — Oxygen-sensing device

PC — Personal computer

Note: The data in the charts derive from suppliers' specifications and have not been verified through independent testing by ECRI or any other agency. Because test methods vary, different products' specifications are not always comparable. Moreover, products and specifications are subject to frequent changes. ECRI is not responsible for the quality or validity of the information presented or for any adverse consequences of acting on such information.

When reading the charts, keep in mind that, unless otherwise noted, the list price does not reflect supplier discounts. And although we try to indicate which features and characteristics are standard and which are not, some may be optional, at additional cost.

For those models whose prices were supplied to us in currencies other than U.S. dollars, we have also listed the conversion to U.S. dollars to facilitate comparison among models. However, keep in mind that exchange rates change often.

Need to know more?

For further information about the contents of this Product Comparison, contact the *HPCS* Hotline at +1 (610) 825-6000, ext. 5265; +1 (610) 834-1275 (fax); or hpcs@ecri.org (e-mail).

Product Comparison Chart

MODEL	ECRI-RECOMMENDED SPECIFICATIONS[1]	AIRSEP	DEVILBISS	DEVILBISS
	Basic O2 Concentrator	NewLife Elite	303DS	303DZ
WHERE MARKETED		Worldwide	North America	North America
FDA CLEARANCE		Not specified	Yes	Yes
CE MARK (MDD)		Not specified	No	No
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	≥90	95 ±3 (1-3), 92 ±3 (4), 90 ±3 (5-6); 6 L/min available with dual-flow option	93 ±3 (0.5-3)	93 ±3 (0.5-3)
FLOW SELECTIONS, L/min	3	0.5-6 (0.5 increments)	0.5-3 (0.25 increments)	0.5-3 (0.25 increments)
OUTLET PRESSURE, psig		6.5	8.5	8.5
SOUND LEVEL, dBA		48	51 average	51 average
ALARMS	High/low pressure, battery, low purity, power failure, occlusion	Power failure, high/low pressure, battery test, low purity, oxygen monitor test with optional EcoCheck	Audible and visual; power failure, restricted flow, long/short/no cycle, high/low pressure	Audible and visual; power failure, restricted flow, long/short/no cycle, high/low pressure
OCSI	Yes	Optional (with EcoCheck O2 monitor)	Yes	No
FILTERS	Gross particle or bacteria	Air-intake gross particle, 10,000/hr bacteria	Gross particle, intake, compressor, final bacteria	Gross particle, intake, compressor, final bacteria
MOBILITY				
Casters	User preference	Built-in	Yes	Yes
Handle	User preference	Reinforced	Yes	Yes
CABINETRY	User preference	Double-insulated ABS plastic	Flame retardant, plastic	Flame retardant, plastic
POWER CONSUMPTION, W		350; 280 with optional EcoCheck	270	270
POWER, VAC, Hz		120, 60; 220-240, 50; 220, 60	115, 60	115, 60
H x W x D, cm (in)		72.4 x 39.9 x 36.8 (28.5 x 15.7 x 14.5)	58.4 x 35.2 x 30.5 (23 x 13.9 x 12)	58.4 x 35.2 x 30.5 (23 x 13.9 x 12)
WEIGHT, kg (lb)		24.5 (54)	17.3 (38)	16.8 (37)
ACCESSORIES	User preference	Optional EcoCheck oxygen monitor, air outlet, dual flow, pediatric flowmeter	Installable and remote low-output flowmeters (both with 0.125 L increments), Smart Track module	Installable and remote low-output flowmeters (both with 0.125 L increments)
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price		Not specified	$2,100	$1,900
Warranty		3 years (optional 1, 5, and 7 years); lifetime labor	10 years, valves/OSD; 3 years, other components; 3 years, labor; extended option available	10 years, valves; 3 years, other components; 3 years, labor; extended option available
Year first sold		Not specified	1996	1996
Fiscal year		January to December	July to June	July to June
OTHER SPECIFICATIONS		Flow lockout; brass fittings; aluminum refillable sieve beds; industrial-grade solenoid valves; handles, handgrips, and built-in protected wheels; multiple options. CSA approved to IEC 601-1; meets requirements of ANSI.	Pressure-sensing system; audible/visual safety alarms; no-flow safety alarm; self-diagnostic system; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel. Meets requirements of ANSI.	Pressure-sensing system; audible/visual safety alarms; no-flow safety alarm; self-diagnostic system; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel. Meets requirements of ANSI.
Supplier Footnotes	[1]These recommendations are the opinions of ECRI's technology experts. ECRI assumes no liability for decisions made based on this data.			
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	DEVILBISS 515ADS	DEVILBISS 515ADZ	INVACARE IRC5LX Invacare Platinum XL	INVACARE IRC5LXO2 Invacare Platinum XL with SensO2[1]
WHERE MARKETED	North America (worldwide versions available)	North America (worldwide versions available)	Worldwide	Worldwide
FDA CLEARANCE	Yes	Yes	Yes	Yes
CE MARK (MDD)	Yes (international versions)	Yes (international versions)	No	No
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	93 ±3 (1-5)	93 ±3 (1-5)	87-95.6 (1-5)	87-95.6 (1-5)
FLOW SELECTIONS, L/min	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)
OUTLET PRESSURE, psig	8.5	8.5	5	5
SOUND LEVEL, dBA	49 average	48 average	50	50
ALARMS	Audible/visual power on, power failure, low flow, O2 purity, processor error; audible high pressure	Audible/visual power on, power failure, low pressure; audible high pressure	High/low pressure, power failure	High/low pressure, power failure, low O2
OCSI	Yes	No	No	Yes
FILTERS	Gross particle, extended life intake, final bacteria	Gross particle, extended life intake, final bacteria	Gross particle, compressor inlet, outlet HEPA, exhaust	Gross particle, compressor inlet, outlet HEPA, exhaust
MOBILITY				
Casters	Yes	Yes	Yes	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	External cabinet parts are flame retardant	External cabinet parts are flame retardant	Noryl plastic base, polycarbonate ABS cabinet	Noryl plastic base, polycarbonate ABS cabinet
POWER CONSUMPTION, W	385 average; 320 below 21/2 L/min	385 average	390	390
POWER, VAC, Hz	115, 60; international models available	115, 60; international models available	120 ±10%, 60	120 ±10%, 60
H x W x D, cm (in)	70.5 x 40.6 x 35.6 (27.8 x 16 x 14)	70.5 x 40.6 x 35.6 (27.8 x 16 x 14)	67.1 x 46.7 x 36.6 (26.4 x 18.4 x 14.4)	67.1 x 46.7 x 36.6 (26.4 x 18.4 x 14.4)
WEIGHT, kg (lb)	22.2 (49)	22.7 (50)	23.6 (52)	23.6 (52)
ACCESSORIES	Installable and remote low-output flowmeters (both with 0.125 L increments), Smart Track module	Installable and remote low-output flowmeters (both with 0.125 L increments)	Remote flowmeter (IRCRF5)	Remote flowmeter (IRCRF5)
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	$2,200	$2,000	$1,218 MSRP	$1,378 MSRP
Warranty	5 years, parts and labor	5 years, parts and labor	5 years (no hr limit on compressor); lifetime, valve	5 years (no hr limit on compressor); lifetime, valve
Year first sold	2005	2005	1996	1996
Fiscal year	July to June	July to June	January to December	January to December
OTHER SPECIFICATIONS	Timed cycle; audible/visual safety alarms; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel.	Timed cycle; audible/visual safety alarms; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel.	Auto compressor shut-off circuit; distinct audible alarms; diagnosis over the phone; aluminum rechargeable sieve beds; annual filter changes; available as 220 V model. Meets requirements of ANSI and ETL.	Auto compressor shut-off circuit; distinct audible alarms; diagnosis over the phone; aluminum rechargeable sieve beds; annual filter changes; available as 220 V model; O2 concentration monitoring. Meets requirements of ANSI and ETL.
Supplier Footnotes				
Model Footnotes				[1]With SensO2.
Data Footnotes				

Product Comparison Chart

MODEL	KROEBER AEROPLUS 600	KROEBER KROEBER O2	KROEBER TOPAIR	MEDICAP PRECISE 6000M
WHERE MARKETED	Europe	Europe	Europe	Asia, Europe, United Arab Emirates
FDA CLEARANCE	No	No	No	Not specified
CE MARK (MDD)	Yes	Yes	Yes	CE 0088
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 (1-3), 90 (4), 70 (6)	95 (1-4), 85 (5), 75 (6)	95 (1-8), 80 (10), 70 (12)	95 (1-3), 90 (4), 85 (5)
FLOW SELECTIONS, L/min	0.5-6 stepless	0-2 (0.1 increments), 2-4 (0.1 increments), 4-6 (0.5 increments)	0-6 stepless, 0-12 stepless	0-5
OUTLET PRESSURE, psig	6	9	9	350 mbar
SOUND LEVEL, dBA	38	35	45	45
ALARMS	High/low pressure, temperature, power failure	High pressure	High/low pressure, temperature, power failure	All functions on LCD
OCSI	Yes	Yes	Yes	Not specified
FILTERS	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria microfilter
MOBILITY				
Casters	Yes	Yes	Yes	Optional
Handle	Yes	Yes	Yes	Yes
CABINETRY	Polystyrol	Polystyrol	Polystyrol	Polyurethane
POWER CONSUMPTION, W	350	680	680	350
POWER, VAC, Hz	230, 50	230, 50; optional 115, 60	230, 50	115, 60; 230, 50
H x W x D, cm (in)	49 x 23 x 51 (19.3 x 9.1 x 20)	66 x 24.5 x 53 (26 x 9.6 x 20.9)	66 x 24.5 x 53 (26 x 9.6 x 20.9)	55 x 21 x 55 (21.7 x 8.3 x 21.7)
WEIGHT, kg (lb)	22 (48.5)	39	39	21 (46.3)
ACCESSORIES	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen tubes (2 m and 15 m)	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen tubes (2 m and 15 m)	Disposable humidifier, holder, nasal tube, 2 m tubing, gross-particle filter
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	€700 (US$845)	€700 (US$845)	€2,100 (US$2,536)	€1,800 (US$1,771)
Warranty	2 years	30,000 operating hours (for a maximum of 5 years)	2 years	3 years
Year first sold	2000	2005	1999	1998
Fiscal year	January to December	January to December	January to December	January to December
OTHER SPECIFICATIONS	Microprocessor controlled.	Microprocessor controlled; maintenance by auto adjusting cycle control; modular components set up; filter, fuses, and USB interfaces behind the maintenance lid; integrated flow adjustment; 30,000 hr guarantee for all functional parts; low noise level; made in Germany.	Microprocessor controlled.	None specified.
Supplier Footnotes				
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	MEDICAP PRECISE 6000SM	NIDEK (FAILED TO RESPOND)[1] Mark 5 Plus	OXLIFE Excel	OXLIFE L-3
WHERE MARKETED	Asia, Europe, United Arab Emirates	Worldwide	Worldwide	Worldwide
FDA CLEARANCE	Not specified	Yes	Yes	Yes
CE MARK (MDD)	CE 0088	Yes	Submitted	Not specified
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 (1-4), 91 (5), 83 (6)	95 ±2 (0-4), 90 ±3 (2)	95 ±3 (1-2), 93 ±3 (3)	95 ±3 (1-2), 93 ±3 (3)
FLOW SELECTIONS, L/min	0-6	0.12, 0.25, 0.5-5 (0.5 increments)	0.5-3	0.5-3
OUTLET PRESSURE, psig	350 mbar	9	5	5
SOUND LEVEL, dBA	46	49	50	50
ALARMS	All functions on LCD	System failure, power failure	Power/pressure cycle	Low pressure, system failure, power disconnect
OCSI	Not specified	Optional; continuously monitors, alarms at concentrations below 85%, includes lifetime warranty	Optional	Optional
FILTERS	Gross particle, fine particle, bacteria microfilter	Gross particle, fine particle, bacteria	1 gross particle, 1 intake, 1 bacteria	2 gross particle, 1 intake, 1 bacteria
MOBILITY				
Casters	Optional	Yes	No	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	Polyurethane	ABS injection-molded fire-resistant plastic	ABS plastic	ABS plastic
POWER CONSUMPTION, W	350	20-450	350	350
POWER, VAC, Hz	115, 60; 230, 50	115, 60; 230, 50	115, 60; 220, 50	115, 60; 220, 50
H x W x D, cm (in)	55 x 21 x 55 (21.7 x 8.3 x 21.7)	66 x 38.1 x 38.1 (26 x 15 x 15)	42 x 30 x 30 (16.5 x 11.5 x 11.5)	55 x 27 x 27 (21.6 x 10.6 x 10.6)
WEIGHT, kg (lb)	21 (46.3)	28 (62)	12.7 (28)	15.8 (35)
ACCESSORIES	Disposable humidifier, holder, nasal tube, 2 m tubing, gross-particle filter	Transport handle, pediatric flowmeter, OCSI conversion kit	OCSI conversion kit, cover, pediatric flowmeter, 12 V power supply, transport cable	OCSI conversion kit, cover, pediatric flowmeter, 12 V power supply
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	€1,900 (US$1,869)	Not specified	$1,695	$1,850
Warranty	3 years	3 years, parts and labor	4 years	4 years
Year first sold	1998	Not specified	1997	1991
Fiscal year	January to December	January to December	January to December	January to December
OTHER SPECIFICATIONS	None specified.	Recessed humidifier; slanted air intake; lockable flow-control valve; patented sieve-bed design; visual/audible alarms; vibration-isolated compressor mounting; annual filter change; cage blower to prevent compressor overheating.	Inverter available for powering unit in automobile.	Inverter available for powering unit in automobile.
Supplier Footnotes		[1]Specifications current as of May 2004.		
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	OXLIFE L-6	RESPIRONICS Millennium M5	SEQUAL INTEGRA SEVEN (6323A-7 : 6323A-OM-7)	SEQUAL INTEGRA TEN 2620 : INTEGRA TEN 2622
WHERE MARKETED	Worldwide	Worldwide	Worldwide	Worldwide
FDA CLEARANCE	Yes	Yes	Yes	Yes
CE MARK (MDD)	No	Yes	Yes	Yes
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 ±3 (1-3), 93 ±3 (6)	92 ±4 (5), 94 ±2 (2-4)	91 (1-7)	90-95 (7-10), 92-95 (1-7)
FLOW SELECTIONS, L/min	0.5-6	0-5	Varies	Varies : 1-10
OUTLET PRESSURE, psig	5	Not specified	7	7
SOUND LEVEL, dBA	50	<43	NA	NA
ALARMS	Low pressure, system failure, power disconnect	Low oxygen, low flow, power failure	Power failure, irregular pressure, O2 concentration (optional on some models)	Power failure, irregular pressure, O2 concentration (optional on some models)
OCSI	Optional	Not specified	Optional	Optional
FILTERS	4 gross particle, 1 intake, 1 bacteria	Compressor, prefilter, bacteria, HEPA	Gross particle	Gross particle
MOBILITY				
Casters	Yes	Yes	Yes	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	ABS plastic	Injection-molded plastic	ABS plastic	ABS plastic
POWER CONSUMPTION, W	410	420	400	400
POWER, VAC, Hz	115, 60	230, 50/60	115, 60; 220, 50	115, 60; 220, 50
H x W x D, cm (in)	55 x 27 x 27 (21.6 x 10.6 x 10.6)	68.1 x 48 x 33.8 (26.8 x 18.9 x 13.3)	58.4 x 39.4 x 47 (23 x 15.5 x 18.5)	58.4 x 39.4 x 47 (23 x 15.5 x 18.5)
WEIGHT, kg (lb)	20.4 (45)	22.6 (49.9)	26 (57.3)	26 (57.3)
ACCESSORIES	OCSI conversion kit, cover, dual flowmeter, 12 V power supply	Locking flowmeter, pediatric flowmeter	None specified	None specified
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	$2,050	Not specified	Not specified	Not specified
Warranty	4 years	3 years; optional 5 years	3 years, parts and labor	3 years, parts and labor
Year first sold	1994	2003	2004	2000
Fiscal year	January to December	July to June	January to December	January to December
OTHER SPECIFICATIONS	Inverter available for powering unit in automobile.	None specified.	None specified : Includes oxygen monitor.	Model 2620 includes oxygen monitor.
Supplier Footnotes				
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	WEINMANN OXYMAT 3
WHERE MARKETED	Worldwide
FDA CLEARANCE	No
CE MARK (MDD)	Yes
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 ±3 (1-4), 90 ±3 (5)
FLOW SELECTIONS, L/min	0.5-5 adult, 0.2-3 pediatric
OUTLET PRESSURE, psig	Flowmeter and 10 m connecting tube and nasal cannula or separate dosage monitor and 20 m hose, and nasal cannula
SOUND LEVEL, dBA	≤40
ALARMS	Power failure, high/low pressure, self-test (O2 concentration), high temperature
OCSI	Self-test, indirect control of oxygen concentration when the device is switched on, early detection of failures
FILTERS	Gross particle, fine particle, bacteria
MOBILITY	
Casters	4, 2 with brake
Handle	Yes
CABINETRY	Polypropylene
POWER CONSUMPTION, W	360
POWER, VAC, Hz	230, 50
H x W x D, cm (in)	70 x 40 x 38 (27.6 x 15.7 x 15)
WEIGHT, kg (lb)	20 (44.1)
ACCESSORIES	Flowmeter for adults and children, dose monitor for adults and children with humidifier
DETAILED SERVICE MANUAL	Yes
PURCHASE INFORMATION	
Price	Not specified
Warranty	2 years; 3 years, compressor and circuit board (posts only)
Year first sold	1998
Fiscal year	Not specified
OTHER SPECIFICATIONS	Modular and snap closures for quick and easy service; 20 m hose with dosage monitor (humidification close to patient); filter exchange without opening the housing; recyclable components; energy-saving design. Meets requirements of ISO 8359.
Supplier Footnotes	
Model Footnotes	
Data Footnotes	

Product Comparison Chart

MODEL	ECRI-RECOMMENDED SPECIFICATIONS[1] Basic O2 Concentrator	AIRSEP NewLife Elite	DEVILBISS 303DS	DEVILBISS 303DZ
WHERE MARKETED		Worldwide	North America	North America
FDA CLEARANCE		Not specified	Yes	Yes
CE MARK (MDD)		Not specified	No	No
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	≥90	95 ±3 (1-3), 92 ±3 (4), 90 ±3 (5-6); 6 L/min available with dual-flow option	93 ±3 (0.5-3)	93 ±3 (0.5-3)
FLOW SELECTIONS, L/min	3	0.5-6 (0.5 increments)	0.5-3 (0.25 increments)	0.5-3 (0.25 increments)
OUTLET PRESSURE, psig		6.5	8.5	8.5
SOUND LEVEL, dBA		48	51 average	51 average
ALARMS	High/low pressure, battery, low purity, power failure, occlusion	Power failure, high/low pressure, battery test, low purity, oxygen monitor test with optional EcoCheck	Audible and visual; power failure, restricted flow, long/short/no cycle, high/low pressure	Audible and visual; power failure, restricted flow, long/short/no cycle, high/low pressure
OCSI	Yes	Optional (with EcoCheck O2 monitor)	Yes	No
FILTERS	Gross particle or bacteria	Air-intake gross particle, 10,000/hr bacteria	Gross particle, intake, compressor, final bacteria	Gross particle, intake, compressor, final bacteria
MOBILITY				
Casters	User preference	Built-in	Yes	Yes
Handle	User preference	Reinforced	Yes	Yes
CABINETRY	User preference	Double-insulated ABS plastic	Flame retardant, plastic	Flame retardant, plastic
POWER CONSUMPTION, W		350; 280 with optional EcoCheck	270	270
POWER, VAC, Hz		120, 60; 220-240, 50; 220, 60	115, 60	115, 60
H x W x D, cm (in)		72.4 x 39.9 x 36.8 (28.5 x 15.7 x 14.5)	58.4 x 35.2 x 30.5 (23 x 13.9 x 12)	58.4 x 35.2 x 30.5 (23 x 13.9 x 12)
WEIGHT, kg (lb)		24.5 (54)	17.3 (38)	16.8 (37)
ACCESSORIES	User preference	Optional EcoCheck oxygen monitor, air outlet, dual flow, pediatric flowmeter	Installable and remote low-output flowmeters (both with 0.125 L increments), Smart Track module	Installable and remote low-output flowmeters (both with 0.125 L increments)
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price		Not specified	$2,100	$1,900
Warranty		3 years (optional 1, 5, and 7 years); lifetime labor	10 years, valves/OSD; 3 years, other components; 3 years, labor; extended option available	10 years, valves; 3 years, other components; 3 years, labor; extended option available
Year first sold		Not specified	1996	1996
Fiscal year		January to December	July to June	July to June
OTHER SPECIFICATIONS		Flow lockout; brass fittings; aluminum refillable sieve beds; industrial-grade solenoid valves; handles, handgrips, and built-in protected wheels; multiple options. CSA approved to IEC 601-1; meets requirements of ANSI.	Pressure-sensing system; audible/visual safety alarms; no-flow safety alarm; self-diagnostic system; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel. Meets requirements of ANSI.	Pressure-sensing system; audible/visual safety alarms; no-flow safety alarm; self-diagnostic system; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel. Meets requirements of ANSI.
Supplier Footnotes	[1]These recommendations are the opinions of ECRI's technology experts. ECRI assumes no liability for decisions made based on this data.			
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	DEVILBISS 515ADS	DEVILBISS 515ADZ	INVACARE IRC5LX Invacare Platinum XL	INVACARE IRC5LXO2 Invacare Platinum XL with SensO2[1]
WHERE MARKETED	North America (worldwide versions available)	North America (worldwide versions available)	Worldwide	Worldwide
FDA CLEARANCE	Yes	Yes	Yes	Yes
CE MARK (MDD)	Yes (international versions)	Yes (international versions)	No	No
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	93 ±3 (1-5)	93 ±3 (1-5)	87-95.6 (1-5)	87-95.6 (1-5)
FLOW SELECTIONS, L/min	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)	0.5-5 (0.5 increments)
OUTLET PRESSURE, psig	8.5	8.5	5	5
SOUND LEVEL, dBA	49 average	48 average	50	50
ALARMS	Audible/visual power on, power failure, low flow, O2 purity, processor error; audible high pressure	Audible/visual power on, power failure, low pressure; audible high pressure	High/low pressure, power failure	High/low pressure, power failure, low O2
OCSI	Yes	No	No	Yes
FILTERS	Gross particle, extended life intake, final bacteria	Gross particle, extended life intake, final bacteria	Gross particle, compressor inlet, outlet HEPA, exhaust	Gross particle, compressor inlet, outlet HEPA, exhaust
MOBILITY				
Casters	Yes	Yes	Yes	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	External cabinet parts are flame retardant	External cabinet parts are flame retardant	Noryl plastic base, polycarbonate ABS cabinet	Noryl plastic base, polycarbonate ABS cabinet
POWER CONSUMPTION, W	385 average; 320 below 21/2 L/min	385 average	390	390
POWER, VAC, Hz	115, 60; international models available	115, 60; international models available	120 ±10%, 60	120 ±10%, 60
H x W x D, cm (in)	70.5 x 40.6 x 35.6 (27.8 x 16 x 14)	70.5 x 40.6 x 35.6 (27.8 x 16 x 14)	67.1 x 46.7 x 36.6 (26.4 x 18.4 x 14.4)	67.1 x 46.7 x 36.6 (26.4 x 18.4 x 14.4)
WEIGHT, kg (lb)	22.2 (49)	22.7 (50)	23.6 (52)	23.6 (52)
ACCESSORIES	Installable and remote low-output flowmeters (both with 0.125 L increments), Smart Track module	Installable and remote low-output flowmeters (both with 0.125 L increments)	Remote flowmeter (IRCRF5)	Remote flowmeter (IRCRF5)
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	$2,200	$2,000	$1,218 MSRP	$1,378 MSRP
Warranty	5 years, parts and labor	5 years, parts and labor	5 years (no hr limit on compressor); lifetime, valve	5 years (no hr limit on compressor); lifetime, valve
Year first sold	2005	2005	1996	1996
Fiscal year	July to June	July to June	January to December	January to December
OTHER SPECIFICATIONS	Timed cycle; audible/visual safety alarms; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel.	Timed cycle; audible/visual safety alarms; double-insulated, flame-retardant cabinet; recessed humidifier cavity; accessory removable humidifier stand eliminates condensation; operating instructions on front panel.	Auto compressor shut-off circuit; distinct audible alarms; diagnosis over the phone; aluminum rechargeable sieve beds; annual filter changes; available as 220 V model. Meets requirements of ANSI and ETL.	Auto compressor shut-off circuit; distinct audible alarms; diagnosis over the phone; aluminum rechargeable sieve beds; annual filter changes; available as 220 V model; O2 concentration monitoring. Meets requirements of ANSI and ETL.
Supplier Footnotes				
Model Footnotes				[1]With SensO2.
Data Footnotes				

Product Comparison Chart

MODEL	KROEBER AEROPLUS 600	KROEBER KROEBER O2	KROEBER TOPAIR	MEDICAP PRECISE 6000M
WHERE MARKETED	Europe	Europe	Europe	Asia, Europe, United Arab Emirates
FDA CLEARANCE	No	No	No	Not specified
CE MARK (MDD)	Yes	Yes	Yes	CE 0088
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 (1-3), 90 (4), 70 (6)	95 (1-4), 85 (5), 75 (6)	95 (1-8), 80 (10), 70 (12)	95 (1-3), 90 (4), 85 (5)
FLOW SELECTIONS, L/min	0.5-6 stepless	0-2 (0.1 increments), 2-4 (0.1 increments), 4-6 (0.5 increments)	0-6 stepless, 0-12 stepless	0-5
OUTLET PRESSURE, psig	6	9	9	350 mbar
SOUND LEVEL, dBA	38	35	45	45
ALARMS	High/low pressure, temperature, power failure	High pressure	High/low pressure, temperature, power failure	All functions on LCD
OCSI	Yes	Yes	Yes	Not specified
FILTERS	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria	Gross particle, fine particle, bacteria microfilter
MOBILITY				
Casters	Yes	Yes	Yes	Optional
Handle	Yes	Yes	Yes	Yes
CABINETRY	Polystyrol	Polystyrol	Polystyrol	Polyurethane
POWER CONSUMPTION, W	350	680	680	350
POWER, VAC, Hz	230, 50	230, 50; optional 115, 60	230, 50	115, 60; 230, 50
H x W x D, cm (in)	49 x 23 x 51 (19.3 x 9.1 x 20)	66 x 24.5 x 53 (26 x 9.6 x 20.9)	66 x 24.5 x 53 (26 x 9.6 x 20.9)	55 x 21 x 55 (21.7 x 8.3 x 21.7)
WEIGHT, kg (lb)	22 (48.5)	39	39	21 (46.3)
ACCESSORIES	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen tubes (2 m and 15 m)	Operating manual, refillable humidifier, coarse filter, nasal cannula, oxygen tubes (2 m and 15 m)	Disposable humidifier, holder, nasal tube, 2 m tubing, gross-particle filter
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	€700 (US$845)	€700 (US$845)	€2,100 (US$2,536)	€1,800 (US$1,771)
Warranty	2 years	30,000 operating hours (for a maximum of 5 years)	2 years	3 years
Year first sold	2000	2005	1999	1998
Fiscal year	January to December	January to December	January to December	January to December
OTHER SPECIFICATIONS	Microprocessor controlled.	Microprocessor controlled; maintenance by auto adjusting cycle control; modular components set up; filter, fuses, and USB interfaces behind the maintenance lid; integrated flow adjustment; 30,000 hr guarantee for all functional parts; low noise level; made in Germany.	Microprocessor controlled.	None specified.
Supplier Footnotes				
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	MEDICAP PRECISE 6000SM	NIDEK (FAILED TO RESPOND)[1] Mark 5 Plus	OXLIFE Excel	OXLIFE L-3
WHERE MARKETED	Asia, Europe, United Arab Emirates	Worldwide	Worldwide	Worldwide
FDA CLEARANCE	Not specified	Yes	Yes	Yes
CE MARK (MDD)	CE 0088	Yes	Submitted	Not specified
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 (1-4), 91 (5), 83 (6)	95 ±2 (0-4), 90 ±3 (2)	95 ±3 (1-2), 93 ±3 (3)	95 ±3 (1-2), 93 ±3 (3)
FLOW SELECTIONS, L/min	0-6	0.12, 0.25, 0.5-5 (0.5 increments)	0.5-3	0.5-3
OUTLET PRESSURE, psig	350 mbar	9	5	5
SOUND LEVEL, dBA	46	49	50	50
ALARMS	All functions on LCD	System failure, power failure	Power/pressure cycle	Low pressure, system failure, power disconnect
OCSI	Not specified	Optional; continuously monitors, alarms at concentrations below 85%, includes lifetime warranty	Optional	Optional
FILTERS	Gross particle, fine particle, bacteria microfilter	Gross particle, fine particle, bacteria	1 gross particle, 1 intake, 1 bacteria	2 gross particle, 1 intake, 1 bacteria
MOBILITY				
Casters	Optional	Yes	No	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	Polyurethane	ABS injection-molded fire-resistant plastic	ABS plastic	ABS plastic
POWER CONSUMPTION, W	350	20-450	350	350
POWER, VAC, Hz	115, 60; 230, 50	115, 60; 230, 50	115, 60; 220, 50	115, 60; 220, 50
H x W x D, cm (in)	55 x 21 x 55 (21.7 x 8.3 x 21.7)	66 x 38.1 x 38.1 (26 x 15 x 15)	42 x 30 x 30 (16.5 x 11.5 x 11.5)	55 x 27 x 27 (21.6 x 10.6 x 10.6)
WEIGHT, kg (lb)	21 (46.3)	28 (62)	12.7 (28)	15.8 (35)
ACCESSORIES	Disposable humidifier, holder, nasal tube, 2 m tubing, gross-particle filter	Transport handle, pediatric flowmeter, OCSI conversion kit	OCSI conversion kit, cover, pediatric flowmeter, 12 V power supply, transport cable	OCSI conversion kit, cover, pediatric flowmeter, 12 V power supply
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	€1,900 (US$1,869)	Not specified	$1,695	$1,850
Warranty	3 years	3 years, parts and labor	4 years	4 years
Year first sold	1998	Not specified	1997	1991
Fiscal year	January to December	January to December	January to December	January to December
OTHER SPECIFICATIONS	None specified.	Recessed humidifier; slanted air intake; lockable flow-control valve; patented sieve-bed design; visual/audible alarms; vibration-isolated compressor mounting; annual filter change; cage blower to prevent compressor overheating.	Inverter available for powering unit in automobile.	Inverter available for powering unit in automobile.
Supplier Footnotes		[1]Specifications current as of May 2004.		
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	OXLIFE L-6	RESPIRONICS Millennium M5	SEQUAL INTEGRA SEVEN (6323A-7 : 6323A-OM-7)	SEQUAL INTEGRA TEN 2620 : INTEGRA TEN 2622
WHERE MARKETED	Worldwide	Worldwide	Worldwide	Worldwide
FDA CLEARANCE	Yes	Yes	Yes	Yes
CE MARK (MDD)	No	Yes	Yes	Yes
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 ±3 (1-3), 93 ±3 (6)	92 ±4 (5), 94 ±2 (2-4)	91 (1-7)	90-95 (7-10), 92-95 (1-7)
FLOW SELECTIONS, L/min	0.5-6	0-5	Varies	Varies : 1-10
OUTLET PRESSURE, psig	5	Not specified	7	7
SOUND LEVEL, dBA	50	<43	NA	NA
ALARMS	Low pressure, system failure, power disconnect	Low oxygen, low flow, power failure	Power failure, irregular pressure, O2 concentration (optional on some models)	Power failure, irregular pressure, O2 concentration (optional on some models)
OCSI	Optional	Not specified	Optional	Optional
FILTERS	4 gross particle, 1 intake, 1 bacteria	Compressor, prefilter, bacteria, HEPA	Gross particle	Gross particle
MOBILITY				
Casters	Yes	Yes	Yes	Yes
Handle	Yes	Yes	Yes	Yes
CABINETRY	ABS plastic	Injection-molded plastic	ABS plastic	ABS plastic
POWER CONSUMPTION, W	410	420	400	400
POWER, VAC, Hz	115, 60	230, 50/60	115, 60; 220, 50	115, 60; 220, 50
H x W x D, cm (in)	55 x 27 x 27 (21.6 x 10.6 x 10.6)	68.1 x 48 x 33.8 (26.8 x 18.9 x 13.3)	58.4 x 39.4 x 47 (23 x 15.5 x 18.5)	58.4 x 39.4 x 47 (23 x 15.5 x 18.5)
WEIGHT, kg (lb)	20.4 (45)	22.6 (49.9)	26 (57.3)	26 (57.3)
ACCESSORIES	OCSI conversion kit, cover, dual flowmeter, 12 V power supply	Locking flowmeter, pediatric flowmeter	None specified	None specified
DETAILED SERVICE MANUAL	Yes	Yes	Yes	Yes
PURCHASE INFORMATION				
Price	$2,050	Not specified	Not specified	Not specified
Warranty	4 years	3 years; optional 5 years	3 years, parts and labor	3 years, parts and labor
Year first sold	1994	2003	2004	2000
Fiscal year	January to December	July to June	January to December	January to December
OTHER SPECIFICATIONS	Inverter available for powering unit in automobile.	None specified.	None specified : Includes oxygen monitor.	Model 2620 includes oxygen monitor.
Supplier Footnotes				
Model Footnotes				
Data Footnotes				

Product Comparison Chart

MODEL	WEINMANN OXYMAT 3
WHERE MARKETED	Worldwide
FDA CLEARANCE	No
CE MARK (MDD)	Yes
O2 CONCENTRATION AT SPECIFIED FLOW, % (L/min)	95 ±3 (1-4), 90 ±3 (5)
FLOW SELECTIONS, L/min	0.5-5 adult, 0.2-3 pediatric
OUTLET PRESSURE, psig	Flowmeter and 10 m connecting tube and nasal cannula or separate dosage monitor and 20 m hose, and nasal cannula
SOUND LEVEL, dBA	≤40
ALARMS	Power failure, high/low pressure, self-test (O2 concentration), high temperature
OCSI	Self-test, indirect control of oxygen concentration when the device is switched on, early detection of failures
FILTERS	Gross particle, fine particle, bacteria
MOBILITY	
Casters	4, 2 with brake
Handle	Yes
CABINETRY	Polypropylene
POWER CONSUMPTION, W	360
POWER, VAC, Hz	230, 50
H x W x D, cm (in)	70 x 40 x 38 (27.6 x 15.7 x 15)
WEIGHT, kg (lb)	20 (44.1)
ACCESSORIES	Flowmeter for adults and children, dose monitor for adults and children with humidifier
DETAILED SERVICE MANUAL	Yes
PURCHASE INFORMATION	
Price	Not specified
Warranty	2 years; 3 years, compressor and circuit board (posts only)
Year first sold	1998
Fiscal year	Not specified
OTHER SPECIFICATIONS	Modular and snap closures for quick and easy service; 20 m hose with dosage monitor (humidification close to patient); filter exchange without opening the housing; recyclable components; energy-saving design. Meets requirements of ISO 8359.
Supplier Footnotes	
Model Footnotes	
Data Footnotes	