

Technology Landscape: Oxygen concentrators

October 2015

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Landscape of commercially available oxygen concentrators

October 2015

Manufacturer	AirSep	AirSep	AirSep	AirSep	Alvi Medtech	Beijing North Star Yao SciTech	Beijing North Star Yao SciTech	Caire
Location	United States	United States	United States	United States	India	China	China	United States
Device type	Portable	Portable	Stationary	Stationary	Stationary	Stationary	Portable	Stationary
Device family	Focus	FreeStyle	NewLife	VisionAire	Mountain Air	FY	FY600	Companion 5
Devices	Focus	FreeStyle Freestyle 5	NewLife Elite NewLife Intensity	VisionAire 2 VisionAire 3 VisionAire 5	Mountain Air	FY3 FY4 FY5 FY8 FY10	FY600	Companion 5
Release date	March 2011	July 2013 (Freestyle 5)	1997	October 2010	In development	April 2011	April 2011	5/2/2012
Retail price (USD)	2,850	2,850	1345 (Intensity) 750 (Elite)	750 (Visionaire 5)	Unknown	Unknown	Unknown	Unknown
Noise (dBA)	45	38-44	48-50	40	55	40-56	52	40
Average power consumption (W)	28	< 120	350	290	450	380-480	Not specified	250 @ 2 LPM 350 @ 5 LPM
Power efficiency (W/LPM)	70	NA	70	58	90	48-127	87	125 @ 2 LPM 70 @ 5 LPM
Min oxygen output flow rate	2 (continuous equivalent)	1 (continuous equivalent)	0.13	0.13	1	0.5	Not specified	0.5
Max oxygen output capacity (SLPM)	2 (continuous equivalent) 0.4 LPM (based on freestyle)	3, 5 (continuous equivalent) 1 LPM continuous	10	5	5	3-10	0.6	5
Output pressure (psig)	NA	NA	20	4.5	7.3	5.8-8.7	5.8-8.7	4.6
Oxygen concentration (%)	87-95.6	87-95.5	87-95.5	87-95.5	88-96	≥90	≥90	87-95.5
Oxygen sensor	no	no	optional	optional	Not specified	optional	Not specified	optional
Oxygen alarm range(s)	Not specified	Not specified	< 85% ± 3%	< 82%	Not specified	Not specified	NA	Below normal: 70%-85% Abnormal: < 70%
Alarms	Power failure High/low flow Malfunction	Power failure High/low flow Malfunction	High temperature High/low pressure Power failure Low O2 Battery test	High temperature High/low pressure Power failure Low O2 Low flow	Power failure Performance	High temperature Low O2 High/low pressure Power failure	Not specified	Power failure High/low flow Malfunction Low O2
Width (inches)	4.8 (12.2 cm)	6.1-6.6 (15.5-16.8 cm)	16.5 (41.9 cm)	14.1 (35.8 cm)	14.8 (37.5 cm)	11.4-15.0 (29.0-38.1 cm)	7.3 (18.5 cm)	12.5 (31.8 cm)
Height (inches)	6.5 (16.3 cm)	8.6-10.7 (21.8-27.2 cm)	27.5 (69.9 cm)	20.8 (52.8 cm)	25.8 (65.5 cm)	19.7-23.6 (50.0-60 cm)	5.3 (13.5 cm)	21.5 (54.6 cm)
Depth (inches)	2.5 (6.4 cm)	3.6-4.4 (9.1-11.2 cm)	14.5 (36.8 cm)	11.5 (29.2 cm)	13.9 (35.4 cm)	12.2-17.7 (31.0-45.0)	13.5 (34.3 cm)	13.5 (34.3 cm)
Weight	1.8 lb (.8 kg)	4.4-6.2 lb (2.0-2.8 kg)	58.0 lb (26.3 kg)	30.0 lb (13.6 kg)	52.8 lb (24 kg)	46.3-66.1 lb (21.0-30 kg)	9.5 lb (4.3 kg)	36.0 lb (16.3 kg)
Outlet style and material	Barb	Plastic barb	Metal threads	Aluminum barb	Threads	Plastic threads	Metal barb	Metal barb
Power VAC/Hz input options	100-240/50-60	100-240/50-60	120/60, 220-240/50	115/60, 220-240/50-60	220-230/50	100-240/50-60	100-240/Not specified	120/60, 230/50
Battery chemistry	Li-Ion	Li-Ion	NA	NA	NA	NA	Li-Ion	NA
Battery life (hours)	3.0	1.0-3.5	NA	NA	NA	NA	0.1	NA
Battery recharge time (hours)	4.0	3.25	NA	NA	NA	NA	Not specified	NA
Circuit breaker and/or fuse?	Neither	Neither	Circuit breaker	Circuit breaker	Not specified	Not specified	Not specified	Fuse
Alarm battery or capacitor?	NA	NA	9V Battery	Capacitor	Not specified	Not specified	Not specified	Capacitor
Filters and time until replacement	Felt compressor filter: 5000 hours Filter in product tank, no required service	Gross particle filter: weekly cleaning Product filter: 10,000 hours Felt filter: 5000 hours	Gross particle filter: daily to weekly cleaning depending on dust Product filter: 25,000 hours Optional felt filter: 5,000 hours	Felt inlet filter: No required service Filter in product tank, no required service	Not specified	Air filter core: time not specified	Air filter core: time not specified	Intake filter: 2 years Product filter: 2 years
Operating temperature	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	41°F-95°F (5°C-35°C)	41°F-105°F (5°C-40.5°C)	41°F-104°F (5°C-40°C)	104°F (max) (40°C)	Not specified	41°F-104°F (5°C-40°C)
Operating humidity (RH%)	10-95	< 95	95	95	95	85	Not specified	< 95
Operating level	10,000 ft (3,048 m)	12,000 ft (3,658 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	3,281 ft (1000 m)	Not specified	Not specified	9,878 ft (3,010 m)
Standard warranty (yrs)	3 (1 for battery)	3 (1 for battery)	5	5	Not specified	1.5	Not specified	3
Other scheduled maintenance	Service after 5,000 hours: replace felt filter and check O2 > 87%	No scheduled maintenance	Not specified	Not specified	Not specified	Not specified	Not specified	2 years: check power cord, flow concentration/rate, alarms
Certification	FAA, FDA	CE 0459, ISO 9001:2008, ISO 13485:2003, FDA, FAA	ISO 8359, ISO 9001, DPA 01, CE 0459, CSA, FDA K960309	ISO 8359, FDA, CE 0459, ISO 9001	ISO 8359	ISO 8359, ISO 9000, CE, CMD, ISO 9001:2000	ISO8359, CE 0197, ISO 9001:2000	FDA K121167, CE
Continuous or pulse flow	Pulse	Pulse	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Trigger sensitivity (cmH2O)	0.114	0.054, 0.084	NA	NA	NA	NA	NA	NA
Notes	No 510K found	No 510K found	Looks just like the Diamedica unit... Rank 1 of 7 by D. Peel Only D. Peel model to meet DPA 01	Billed as no maintenance Rank 2 of 7 by D. Peel No 510K found	Uses "tamperproof hour counter"	Not FDA Approved Rank 4 of 7 by D. Peel	Not FDA Approved	intake & bacteria filter
Links	http://www.airsep.com/Products/Products/Focus.aspx	http://www.airsep.com/Products/Products/FreeStyle5.aspx	http://www.airsep.com/Products/Products/NewLife_Family.aspx	http://www.airsep.com/Products/Products/VisionAire.aspx	http://alvimedtech.com/	http://www.bnsst.com/eng/pp.asp	http://www.bnsst.com/eng/pp.asp	http://www.cairemedical.com/Products/Companion_5.aspx
References in literature	NA	NA	La Vincente (2001), Peel (2009), Peel (2013)	Howie (2008), Peel (2009), Peel (2013)	NA	Peel (2013)	NA	NA
Manual available?	Yes	Yes	Yes	Yes	No	Brochure Only	Brochure Only	Yes

Landscape of commercially available oxygen concentrators

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Manufacturer	Canta Medical Tech Co., Ltd	Canta Medical Tech Co., Ltd	Canta Medical Tech Co., Ltd	Chart SeQual Technologies	Delphi*	DeVilbiss	DeVilbiss	DeVilbiss
Location	China	China	China	United States	United States	United States	United States	United States
Device type	Stationary	Stationary	Portable	Portable	Portable, assembled	Stationary	Tank Filler	Portable
Device family	HG	V	Mini	SeQual	Evo Central Air	525 Series	iFill	iGo
Devices	HG3 HG5 HG8 HG10	V3 V5 V8	M2	eQuinox Eclipse 5 Eclipse 3	RS-00400	525DS 525KS 525PS	535D	306DS
Release date	Unknown	Unknown	Unknown	3/14/2014	1/3/2008	March 2008	8/17/2012	2009
Retail price (USD)	315-527	338-556	389	4,850 (eQuinox) 2,850 (Eclipse 5)	4,495	585	2,000	2,689
Noise (dBA)	45-50	40-45	40	37-47	43	48	50	48 (typical) 55 (max)
Average power consumption (W)	350-530	350-480	90	110	120 (max while charging)	310	400	< 120
Power efficiency (W/LPM)	53-117	60-117	90	37	NA	62	210	NA
Min oxygen output flow rate	1	1	1 (continuous equivalent)	0.5	0.2	0.5	NA	1
Max oxygen output capacity (SLPM)	3-10	3-8	5 (continuous equivalent)	3	0.9	5	1.9 (average, calculated)	3
Output pressure (psig)	5.8-11.6	7.3-11.6	NA	5	17	8.5	1800-2200	4-6 (max 15)
Oxygen concentration (%)	90-96	90-96	90-96	87-93	87-93	90-96	90-96	88-94
Oxygen sensor	optional	optional	Not specified	standard	standard	standard	NA	standard
Oxygen alarm range(s)	Not specified	Not specified	NA	Below normal (yellow): 70%-85% Abnormal (red): < 70%	Warning: < 82%	Yellow: < 84% ± 2% Red: < 60%	NA	Low O2 Light: 75-85% Service Required Light (red) and Audible Alert: < 75%
Alarms	High temperature Power failure Low O2 High/low pressure	High temperature Power failure Low O2 High/low pressure Valve failure	Not specified	Power failure Low O2 Malfunction	Low O2 Power failure	High/low pressure Power failure Low O2 Low flow	Low flow Malfunction	Power failure High/low flow High temperature Low O2 Malfunction
Width (inches)	15.7 (39.9 cm)	15.4 (39.1 cm)	7.8 (19.9 cm)	10.9-11.4 (27.7-29.0 cm)	7.4 (18.8 cm)	13.5 (34.3 cm)	12.3 (31.1 cm)	11.0 (27.9 cm)
Height (inches)	25.6 (65 cm)	24.4 (62.0 cm)	12.8 (32.4 cm)	14.0-17.9 (35.6-45.5 cm)	11.6 (29.5 cm)	24.5 (62.2 cm)	28.5 (72.4 cm)	15.0 (38.1 cm)
Depth (inches)	14.4 (36.6 cm)	13.3 (33.8 cm)	12.6 (32.0 cm)	7.1-7.9 (18.0-20.1 cm)	4.6 (11.7 cm)	12.0 (30.5 cm)	22.5 (57.2 cm)	8.0 (20.3 cm)
Weight	59.5-68.3 lb (27.0-31 kg)	46.3-52.9 lb (21.0-24.0 kg)	13.2 (6.0 kg)	14.0-18.0 lb (6.4-8.2 kg)	9.8 lb (4.5 kg)	36.0 lb (16.3 kg)	66.0 lb (30.0 kg)	19.0 lb (8.6 kg)
Outlet style and material	Plastic threads	Metal barb	Plastic barb	Aluminum barb	Plastic barb	Brass threads	NA	Metal barb
Power VAC/Hz input options	220/50	220/50	220/60	100-240/50-60	100-240/50-60	115/60 - 230/50	115V/60, 230/50, 220/60, 187-264/50-60	100-250/50-60
Battery chemistry	NA	NA	NA	Li-Ion	Li-Ion	NA	NA	Li-Ion
Battery life (hours)	NA	NA	NA	2.8 - 5.0	3.0-4.0 @ setting 2	NA	NA	1.6-5.4
Battery recharge time (hours)	NA	NA	NA	1.5-3.5 for 80%	3.0	NA	NA	3 (w/ external charger)
Circuit breaker and/or fuse?	Circuit breaker	Circuit breaker	Not specified	Neither	Neither	Circuit breaker and fuse	Fuse	Neither
Alarm battery or capacitor?	Not specified	Not specified	Not specified	9V Battery	Not specified	Capacitor	NA	Neither
Filters and time until replacement	Noise filter Sponge paper filter Second grade filter	Coarse filter Paper filter (intake) Bacteria filter	Dust filter Inner filter	Coarse Filter: Wash weekly, replace 1 year Inlet Filter: 1 year Product filter: 1 year	Input filter: "wash periodically" Patient filter: change as indicated by device Compressor filter: change as indicated by device	Coarse filter: wash weekly Intake filter: 2 years Bacteria filter: 3 years Compressor filter: 5 years	Coarse filter: wash weekly	Dust filter: wash weekly
Operating temperature	50°F-104°F (10°C-40°C)	50°F-104°F (10°C-40°C)	Not specified	50°F-104°F (10°C-40°C)	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	41°F-95°F (5°C-35°C)	41°F-104°F (5°C-40°C)
Operating humidity (RH%)	30-85	30-85	Not specified	10-95	5-95	95	15-95	10-95
Operating level	Not specified	Not specified	Not specified	13,123 ft (4,000 m)	8,000 ft (2438.4 m)	13,000 ft (3,962 m)	6,562 ft (2,000 m)	13,123 ft (4,000 m)
Standard warranty (yrs)	3	3	Not specified	3 (5 optional)	3	3	3 or 8000 hours	3 (1 for battery)
Other scheduled maintenance	Not specified	Not specified	Not specified	Annual: replace 9V battery, alarm verification, electrical safety test, clean inside and outside of unit	Replace battery: 300 cycles Contact distributor in case of alarm	Check alarms and concentration: 2 years	Not specified	No maintenance for 3 years
Certification	CE; ISO13485; FDA K081508	CE; ISO13485	CE; ISO13485	FAA, FDA K120785, CE 0459	FAA, FDA K073242	ISO 8359, FDA K071397, CE	CSA, FDA K053240, CE-0044	FAA, ISO 8359, FDA K081468, CE-0044
Continuous or pulse flow	Continuous	Continuous	Pulse	Both	Not specified	Continuous	NA	Both
Trigger sensitivity (cmH2O)	NA	NA	Not specified	0.135-0.37 (adjustable)	NA	NA	NA	0.238
Notes	3,000 hours continuous operation	No 510K found	Uses inverter for DC operation No 510K found	—	*Not OEM. Rebrand of Oxus Korea, also licensed to Drive Medical Uses rotary compressor	Rank 3 of 7 by D. Peel	Fill time: 75 minutes (IM6 cylinder) "The iFill has a proprietary connection as required by the Food and Drug Administration (FDA) and, therefore, other cylinders are not compatible."	8.8AH Battery
Links	http://en.canta.com.cn/products/178148.comContentId=14.html	http://en.canta.com.cn/products/8/FromComContentId=137154553316ComContentId=78.comContentId=7.html	http://en.canta.com.cn/products/2/8/FromComContentId=13715494297906ComContentId=18.comContentId=18.html	http://www.airsep.com/Products/Products/SeQual_eQuinox.aspx	http://www.oxygenconcentratormachines.com/DelphiEvoCentralAir.html	http://www.devilbisshealthcare.com/products/oxygen-therapy/stationary-oxygen-3-liter-compact-oxygen-concentrator	http://www.devilbisshealthcare.com/products/oxygen-therapy/portable-oxygen/iFill	http://www.devilbisshealthcare.com/products/oxygen-therapy/portable-oxygen/iGo
References in literature	NA	NA	NA	NA	NA	Peel (2009), La Vincente (2001), Masroor (2013), Peel (2013)	NA	NA
Manual available?	Data sheet only	Data sheet only	Flyer only	Yes	Brochure Only	Yes	Yes	Yes

Landscape of commercially available oxygen concentrators

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Manufacturer	Diamedica*	Drive Medical*	Drive Medical	Drive Medical	Inogen	Inogen	Inova Labs Inc.	Inova Labs Inc.
Location	United Kingdom	United States	United States	United States	United States	United States	United States	United States
Device type	Stationary, Assembled	Portable	Stationary	Stationary	Stationary	Portable	Portable	Stationary
Device family	Oxygen Concentrator	Oxus	Pure	Solstice	At Home	One	LifeChoice	Activox
Devices	Oxygen Concentrator	NA	Pure	18050 18055	Inogen At Home	G2 G3	Activox Pro Activox Sport	DUO2
Release date	Unknown	Unknown	4/16/2015	3/18/2008	6/20/2014	5/13/2004	12/28/2011	March 2015
Retail price (USD)	Unknown	2,395	1,099	Unknown	1,495	2,495	3,895-3,995	Unknown
Noise (dBA)	Not specified	43	45	45-47	Not specified	38-42	41-46	45
Average power consumption (W)	430	120 (max while charging)	360-390	300	275	85-90	40	372
Power efficiency (W/LPM)	54	NA	72-78	60	50-55	65-69	NA	74
Min oxygen output flow rate	2	0.2	0.5	1	1	0.2	10.9 ml (pulse)	1
Max oxygen output capacity (SLPM)	8	0.9	5	5	5	1.3	30.0 ml (pulse)	5
Output pressure (psig)	20	17	5-6	8.5	4.9 - 25.9	NA	19	8
Oxygen concentration (%)	Not specified	87-96	87-96	91-95	87-96	87-96	87-93	90-96
Oxygen sensor	Not specified	standard	optional	optional	standard	standard	standard	standard
Oxygen alarm range(s)	NA	Warning: < 82%	Warning: 72% - 81% Alarm: < 72%	Yellow low oxygen light: "below an acceptable oxygen level"	Oxygen low Oxygen error O2 sensor failure alarm	Oxygen low: < 82% Oxygen error: < 50% O2 sensor failure alarm	O2 sensor alarm: < 85%	Warning: < 82%
Alarms	High temperature High/low pressure Power failure Low O2 Battery test	Power failure Low O2 Maintenance Low flow	Low O2 Low flow Power failure High temperature	Power failure Low O2 Low flow Malfunction	Sieve failure Low O2 Malfunction Sensor failure Low flow High/low temp Smoke detected Power failure	Power failure High/low temperature Internal error Low O2 High/low pressure	Low O2 Low flow Power failure Malfunction	Low O2 Low flow Power failure Malfunction
Width (inches)	16.5 (42.0 cm)	7.6 (19.3 cm)	16.8 (42.5 cm)	14.0 (35.6 cm)	13.0 (33.0 cm)	3-3.9 (7.62-9.9 cm)	9.1 (23.1 cm)	14.2 (36.0 cm)
Height (inches)	27.6 (70.0 cm)	11.9 (30.2 cm)	24.5 (62.2 cm)	23.0 (58.8 cm)	16.5 (41.9 cm)	7.25-9.5 (18.4-24.13 cm)	7.9 (20.1 cm)	24.8 (63.0 cm)
Depth (inches)	14.6 (37.0 cm)	5.6 (14.2 cm)	10.3 (26.2 cm)	12.0 (30.5 cm)	7.0 (17.8 cm)	8.75-10.7 (22.2-27.2 cm)	4.3 (10.9 cm)	14.6 (37.0 cm)
Weight	53.9 lb (24.5 kg)	9.9 lb (4.5 kg)	35.0 lb (15.9 kg)	37.0 lb (16.8 kg)	18.0 lb (8.2 kg)	4.8-7.0 lb (2.2-3.2 kg)	4.8 lb (2.2 kg)	37.5 (17.0 kg)
Outlet style and material	Metal threads	Plastic barb	Aluminum barb	Metal threads	Aluminum barb	Metal barb	Metal barb	Plastic threads*
Power VAC/Hz input options	220-240/50	100-240/50-60	120±10%/60	115/60 230V mentioned in manual, not specs	100-240/50-60	100-240/50-60	100-240/50-60	110±10%/60, 230±10%/50
Battery chemistry	NA	Li-Ion	NA	NA	NA	Li-Ion	Li-Ion	NA
Battery life (hours)	NA	3.0-4.0 @ setting 2	NA	NA	NA	4.5-10.0	5.0-15.0	NA
Battery recharge time (hours)	NA	3.0	NA	NA	NA	2.25-8.0	4.0-7.0	NA
Circuit breaker and/or fuse?	Circuit breaker	Neither	Not specified	Circuit breaker	Neither	Neither	Neither	Circuit breaker
Alarm battery or capacitor?	9V Battery	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified
Filters and time until replacement	Gross particle filter: daily-weekly cleaning Product filter: 25,000 hours Optional felt filter: 5,000 hours	Input filter: "wash periodically" Patient filter: change as indicated by device Compressor filter: change as indicated by device	Compressor Inlet Foam Intake: wash as needed HEPA Intake: Replace yearly or as needed	Gross particle filter: weekly cleaning	Gross particle filter: weekly cleaning Product Filter: Between patients Intake Filter: No PM stated	Product filter	Intake grill: clean w/ dry q-tip monthly	Cabinet filter Air intake filter: replace yearly Product filter
Operating temperature	Not specified	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	"40°F-90°F (10°C-35°C)" (40°F-90°F converts to 4°C-32°C)	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	50°F-95°F (10°C-35°C)
Operating humidity (RH%)	Not specified	5-95	20-60	30-70	15-95	0-95	≤ 95	≤ 95
Operating level	Not specified	8,000 ft (2438 m)	13,123 ft (4000 m)	"7.3-15.4 psi (50~106 kpa)" Converts to 5500 m	8,000 ft (2438 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	13,000 ft (4000 m)
Standard warranty (yrs)	Not specified	3	3	5	3	3	3 (1 for battery / sieve)	Not specified
Other scheduled maintenance	Not specified	Replace battery: 300 cycles Contact distributor in case of alarm	None specified	Not specified	Sieve columns: User replaceable as needed	Battery: 500 cycles Sieve: 1.5-3 years Valves, intake filter, compressor, fan: 20,000-25,000 hours Oxygen sensor: no service	None specified	Ships with maintenance tool and spare intake filter None specified
Certification	CE ISO 8359:1996* (double check), ISO 9001	FAA, FDA K073242, CE	Likely FDA (US manufacturer)	FDA K080391, ISO 8359	FDA K132489, ISO 8359, IEC 60601-1	CE, CSA, FDA K032818, FAA	FAA, FDA K113317, CE	FDA K132205, CE
Continuous or pulse flow	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	Pulse	Continuous
Trigger sensitivity (cmH2O)	NA	NA	NA	NA	NA	0.167	0.361	NA
Notes	*Based on Airsep Intensity platform Supposed to work in high heat & humidity environments Used primarily in anesthesia system No 510K found	*Not OEM. American distribution of Oxus Korea, also sold under Delphi Uses rotary compressor	—	Manual is broken english, likely Chinese manufacturer, possibly licensed	Only stationary DC unit User serviceable sieve beds Digital flow control	6-12 months of operating data stored, accessible by USB	—	*Has metal barb adapter for threads Intended to be integrated with activox, has built in shelf and power supply to charge FDA clearance 7/1/14
Links	http://www.diamedica.co.uk/english/product_details.cfm?id=263	http://www.oxusamerica.com/specifications	http://www.drivemedical.com/index.php/pure-oxygen-concentrator-2578.html	https://www.drivemedical.com/osc/catalog/omfiles/18055_hangtag.pdf	http://www.inogen.com/products/inogen-at-home-oxygen-concentrator/	http://www.inogen.com/products/a3-systems/	http://www.inovalabs.com/products/	http://www.inovalabs.com/duo2/
References in literature	NA	NA	NA	NA	NA	NA	NA	NA
Manual available?	No	Yes	Yes	Yes	Yes	Yes	Yes	Flyer only

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Manufacturer	Invacare	Invacare	Invacare	Invacare	Kare Medical	Kare Medical	Krober	Krober
Location	United States	United States	United States	United States	Turkey	Turkey	Germany	Germany
Device type	Tank Filler	Stationary	Stationary	Portable	Stationary	Stationary	Stationary	Portable
Device family	Homefill II	PerfectO2	Platinum	XPO2, SOLO2	OxyBreath	OxyBreath Mini	aeroplus	aeroplus
Devices	IOH200	PerfectO2 PerfectO2 V PerfectO2 W	Platinum XL Platinum 5 Platinum 9 Platinum 10	TPO100 TPO100B XPO100 XPO100B	OxyBreath 10L	Mini 3 Mini 5	5	m
Release date	7/23/2002	8/31/2009	7/2/2002	August 2008 (XPO2)	2013	2013	Unknown	Unknown
Retail price (USD)	1,993	836	1913	3,148	950	620	1,000.00 €	2,990.00 €
Noise (dBA)	Not specified	43	50	45	Not specified	Not specified	< 40	40
Average power consumption (W)	140	280-325	585	36	550	165 (Mini 3) 330 (Mini 5)	295	max 100
Power efficiency (W/LPM)	NA	65	59	45	55	55-66	59	125
Min oxygen output flow rate	0	0.5	0.5	0.3	1	0.5	0.5	0.2
Max oxygen output capacity (SLPM)	2	5	10	0.8	10	3 (Mini 3) 5 (Mini 5)	5	0.8
Output pressure (psig)	(input) 14-21	5	5-9	NA	13-19	Not specified	10	NA
Oxygen concentration (%)	> 90	87-95.6	87-94	87-95.6	89-95 (1-9 LPM) 87-93 (10 LPM)	90-96	82-95	> 90
Oxygen sensor	NA	optional	optional	Not specified	optional	optional	standard	standard
Oxygen alarm range(s)	NA	Sieve-GARD compressor shutdown: < 73% Purity warning: 73-85%	Compressor shutdown: < 73% Purity warning: 73-85%	NA	Not specified	Low oxygen: < 82% Service required: < 70%	Warning: 60%-82% Alarm: < 60%	Not specified
Alarms	Low O2 Low flow Malfunction	High temperature Power failure Low flow Low O2	High temperature Power failure Low flow Low O2	Power failure Malfunction High/low flow High/low temp	Not specified	Low O2	High temperature Power failure Low O2 System malfunction Low pressure	High temperature Power failure Low O2 Malfunction
Width (inches)	20.3 (51.6 cm)	15.0 (38.1 cm)	18.4 (46.7 cm)	7.0 (17.8 cm)	Not specified	Not specified	11.4 (29.0 cm)	6.1 (15.5 cm)
Height (inches)	15.0 (38.1 cm)	23.0 (58.4 cm)	26.4 (67.0 cm)	10.0 (25.4 cm)	Not specified	Not specified	23.6 (59.9 cm)	9.1 (23.1 cm)
Depth (inches)	16.0 (40.6 cm)	12.0 (30.5 cm)	14.4 (36.5 cm)	4.0 (10.2 cm)	Not specified	Not specified	15.7 (39.9 cm)	9.8 (24.9 cm)
Weight	33.0 lb (15.0 kg)	40.0-45.0lb (18.1-20.4kg)	54.0 lb (24.5 kg)	6.0 lb (2.7kg) -7.3 lb (3.3kg)	47.7 lb (21.7 kg)	26.4 lb (12 kg) (Mini 3) 33.2 lb (15.1 kg) (Mini 5)	33.1 lb (15.0 kg)	8.0 lb (3.6 kg)
Outlet style and material	NA	Barb	Barb	Barb	Brass threads	Brass threads	Metal threads	Metal barb
Power VAC/Hz input options	120/60	120/60, 230/50	120/60, 230/50	100-240/50-60	220-240/50	220-240/50	230/50, 115/60	100-240/50-60
Battery chemistry	NA	NA	NA	Not specified	NA	NA	NA	Not specified
Battery life (hours)	NA	NA	NA	1.0-7.0	NA	NA	NA	2.0-4.0
Battery recharge time (hours)	NA	NA	NA	4.0	NA	NA	NA	Not specified
Circuit breaker and/or fuse?	Neither	Circuit breaker	Circuit breaker	Neither	Not specified	Not specified	Fuse (x2)	Neither
Alarm battery or capacitor?	NA	Capacitor	Capacitor	Not specified	Not specified	Not specified	Not specified	Not specified
Filters and time until replacement	Coarse filter: wash weekly	Cabinet: Clean weekly Inlet: Inspect annually Product filter: Inspect annually All: replace as needed	Cabinet: Clean weekly Inlet: Inspect annually Product filter: Inspect annually All: replace as needed	Coarse filter: Clean regularly Inlet filter: replace yearly	2 Filters - one labeled as 'dust filter'	Cabinet filter Inlet filter	Coarse filter: Replace every 4 weeks Intake filter: yearly/5000 hours Bacteria filter	Coarse filter: Replace every 4 weeks Intake filter: yearly/5000 hours
Operating temperature	50°F-95°F (10°C-35°C)	50°F-95°F (10°C-35°C)	50°F-95°F (10°C-35°C)	41°F-95°F (5°C-35°C)	41°F-104°F (5°C-40°C)	41°F-104°F (5°C-40°C)	50°F-104°F (10°C-40°C)	41°F-104°F (5°C-40°C)
Operating humidity (RH%)	20-60	20-60	60	15-60	Not specified	Not specified	no rating	15-93
Operating level	NA	6,000 ft (1,828 m) < 90%; 6,000-13,129 ft (1,828 - 4,000 m)	4,000 ft (1,219 m)	10,000 ft (3,048 m)	Not specified	Not specified	10,500 ft (3,200 m)	10,500 ft (3200 m)
Standard warranty (yrs)	3 / 5000 hours	3	5	3 (concentrator) 2 (compressor) 1 (battery)	Not specified	Not specified	5	2 (1 battery)
Other scheduled maintenance	None specified	Inspect exhaust muffler, heat exchanger, compressor at least every 20,000 hours Replace as needed	Inspect exhaust muffler, heat exchanger, compressor at least every 20,000 hours Replace as needed	Function test: annually Replace battery as needed Check o2 purity: every 4,320 hours	Not specified	No maintenance required for 2 years	Annual safety inspection	Annual safety inspection
Certification	FDA K021685, CE	UL1431, UL1097 ETL CSA C22.2 No. 68 FDA K020386, CE, ISO 8359	FDA K020386, CE	FAA, FDA K083751, CE	CE	CE	ISO 8359, CE 0197 DOC	ISO 8359, CE
Continuous or pulse flow	NA	Continuous	Continuous	Pulse	Continuous	Continuous	Continuous	Pulse, quasi-continuous
Trigger sensitivity (cmH2O)	NA	NA	NA	0.389	NA	NA	NA	0.100, 0.200
Notes	24/7 operation possible Combines with invacare platinum 5 or 10 concentrators	Rank 7 of 7 by D. Peel Uses poppet 4-way solenoid valve	—	—	"can work on High temperature countries because it utilizes powerful fan compressor cooling mechanism" "Device could be used in dusty environments if the regular dust filter maintenance is supplied"	"No maintenance required for 2 years" - does not mention cleaning cabinet filter	Not FDA approved	Not FDA approved
Links	http://www.invacare.com/cgi-bin/imhqpord/inv_catalog/rod_cat_detail.jsp?prodID=IOH200	http://www.invacare.com/cgi-bin/imhqpord/inv_catalog/rod_cat_detail.jsp?s=0&prodID=IRCSPQ2V&catOID=536890256	http://www.invacare.com/cgi-bin/imhqpord/inv_catalog/rod_cat_detail.jsp?s=0&prodID=IRC10LXO2	http://www.invacare.com/cgi-bin/imhqpord/inv_catalog/rod_cat_detail.jsp?prodID=XPO100	http://www.karemedical.eu/products/oxygen-therapy/oxybreath-10-lpm-oxygen-concentrator	http://www.karemedical.eu/products/oxygen-therapy	http://www.kroeber.de/site/kroeber_aero5_2_e.asp	http://www.kroeber.de/site/kroeber_aerom_2_e.asp
References in literature	NA	Peel (2013)	NA	NA	NA	NA	NA	NA
Manual available?	Yes	Yes	Yes	Yes	No	No	Yes	Yes

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Manufacturer	Krober	Krober	Legend Medical	Longfei	Longfian	Longfian Scitech	Medicap	Merits Health Products*
Location	Germany	Germany	China	China	China	China	Germany	United States
Device type	Stationary	Stationary	Portable	Stationary	Portable	Stationary	Stationary	Stationary, Assembled
Device family	Krober	topair	LoveGo	LFY	Jay	JAY	PRECISE 6000	Vital
Devices	O2 4.0	2	LoveGo	LFY-I-3A, B, F, G LFY-I-4A, B LFY-I-5A, B, F LFY-I-8A, B	1P 3P 5P	JAY-3 JAY-5 JAY-8 JAY-10	P 6000 P 6000 S	M520 M525
Release date	Unknown	Unknown	Unknown	10/18/2005	Unknown	Unknown	2001	8/4/2005
Retail price (USD)	1200.00 € (4.0) 1100.00 € (O2)	2,500.00 €	1,299	460-785	569	340 (JAY-5) 520 (JAY-10)	Unknown	1875(M520) 2125 (M525)
Noise (dBA)	31 (4.0) 35 (O2)	< 45	38	< 48-62	45	43-50	39	40
Average power consumption (W)	280 (4.0) 350 (O2)	790	90	300-520	75	280-550	< 460 (2.0 A rating) 330 and 350 claimed by distributors	310
Power efficiency (W/LPM)	56 (4.0) 58 (O2)	66	72	90-104	NA	55-93	77	62
Min oxygen output flow rate	1	1.5	1	1	1	0.13	0.1	0.13
Max oxygen output capacity (SLPM)	5 (4.0) 6 (O2)	12	5 @ 40% (1.25 LPM)	3-8	5.0* (probably not 90% o2)	3-10	5 6 (S model)	5
Output pressure (psig)	10	10	5.8-8.7	4.4-10.2	4.4-10.2	5.8-10.2	4.4-5.1	7
Oxygen concentration (%)	82-95 (4.0) 72-95 (O2)	82-95	40-93	90-96	30-90	88-96	77-95	87-96
Oxygen sensor	standard	standard	no	Optional	Not specified	standard	Standard (M designation)	optional
Oxygen alarm range(s)	Warning: 60%-82% Alarm: < 60%	Warning: 60%-82% Alarm: < 60%	NA	Yellow: 70-73 - 85-90% Red: < 70-73%	NA	Red: < 82%	Low: < 82% Service (compressor shutdown): < 72%	Warning: < 85% ± 3% (82% ± 2% for 50 Hz)
Alarms	Hi temp System malfunction Power failure Low O2 Low flow	High temperature Power failure System malfunction Low O2 Low pressure	Power failure High temperature High/low pressure	Power failure High/low pressure	Power failure	High temperature Maintenance High/low pressure Power failure Low O2	High temperature High/low pressure Low O2 Power failure	Power failure High/low pressure Operating fault Low O2
Width (inches)	8.0 (20.3 cm)	15.9 (40.4 cm)	9.6 (24.4 cm)	18.9 (48.0 cm)	7.5 (19.1 cm)	14.8 (37.6 cm)	8.5 (21.5 cm)	14.0 (35.6 cm)
Height (inches)	20.5 (52.1 cm)	21.3 (54.1 cm)	14.3 (36.3 cm)	28.7 (73.0 cm)	12.6 (32.0 cm)	23.6 (59.9 cm)	21.7 (55.0 cm)	23.0 (58.4 cm)
Depth (inches)	21.0 (53.3 cm)	20.3 (51.6 cm)	7.1 (18.0 cm)	19.7 (50.0 cm)	13.8 (35.1 cm)	14.4 (36.6 cm)	21.7 (55.0 cm)	9.0 (22.9 cm)
Weight	35.3 lb, 16.0 kg (4.0) 43.7 lb, 20.0 kg (O2)	99.2 lb (45.0 kg)	11.9 lb (5.4 kg)	44.0-62.7 lb (20.0-28.5 kg)	13.2 lb (6.0 kg)	30.8-66.1 lb (14.0-30.0kg)	46.2 lb (21.0 kg)	30.0 (13.6 kg)
Outlet style and material	Metal threads	Metal threads	Aluminum barb	Metal threads	Not specified	Threads	Plastic threads	Aluminum barb
Power VAC/Hz input options	230/50, 115/60	230/50	110±10%/50-60, 230±10%/50-60	110/50, 220/50	110-220/50-60	110/50-60, 220/50-60	230/50	115/60, 230/50-60
Battery chemistry	NA	NA	Li-ion	NA	NA	NA	NA	NA
Battery life (hours)	NA	NA	1.3 (estimated)	NA	NA	NA	NA	NA
Battery recharge time (hours)	NA	NA	Not specified	NA	NA	NA	NA	NA
Circuit breaker and/or fuse?	Fuse (x3)	Fuse (x3)	Not specified	Fuse	Not specified	Fuse	Fuse	Circuit breaker
Alarm battery or capacitor?	Not specified	9V Battery	Not specified	Not specified	Not specified	Not specified	9V Battery	Capacitor
Filters and time until replacement	Coarse filter: Replace every 4 weeks Intake filter: yearly/5000 hours Bacteria filter	Coarse filter x2: Replace every 4 weeks Intake filter: yearly/5000 hours Bacteria filter	Air filter	Coarse filter: monthly cleaning Intake filter: Check every 3 months, yearly replacement	Not specified	Filter intake cloth	Coarse dust filter: weekly cleaning Fine filter: 6 months or 2000 hours Microfilter: 6 months or 2000 hours Patient bacteria filter: exchange during inspection	Coarse filter: weekly cleaning Inlet filter: replace every 2 years or sooner Product filter: replace with compressor service
Operating temperature	41°F-104°F (5°C-40°C)	50°F-104°F (10°C-40°C)	Not specified	32°F-104°F (0°C-40°C)	50°F-104°F (10°C-40°C)	104°F (max) (40°C)	50°F-104°F (10°C-40°C)	50°F-104°F (10°C-40°C)
Operating humidity (RH%)	93	no rating	Not specified	≤ 80	30-85	85	Not Specified	15-95
Operating level	10,500 ft (3,200 m)	10,500 ft (3,200 m)	12,000 ft (3,658 m)	4468 ft (1360 m)	10,500 ft (3200 m)	NA	Not Specified	Not specified
Standard warranty (yrs)	5	2	7	Lifetime (parts only)	NA	1.25	1	1
Other scheduled maintenance	Annual safety inspection	Annual safety inspection	"Minimal maintenance"	None specified	Not specified	None specified	Inspection and maintenance every year or 2800 hours (replace bacteria filter during)	Check purity every 15,000 hours (3 years) (> 87%)
Certification	ISO 8359, CE 0197 DOC	ISO 8359, CE	Not specified	CE, ISO 13485, FDA K033405	CE & ISO	ISO 8359, FDA K131968, CE	ISO 13485, ISO 8359, CE DoC	FDA K053230, CE
Continuous or pulse flow	Continuous	Continuous	Continuous	Continuous	Not specified	Continuous	Continuous	Continuous
Trigger sensitivity (cmH2O)	NA	NA	NA	NA	NA	NA	NA	NA
Notes	Not FDA approved Expect 1 month service life for cannula	Not FDA approved Rank 6 of 7 by D. Peel	Uses Samsung battery, french sieve, US compressor	Rebranded in India as BPL Medical Technologies OG 4203 and OG 4203 S Optional nebulizer, hourmeter, pulse oximeter Dual flow option	FDA status unknown, probably not approved	Rebranded and assembled in India as Medoxy Oxygen Concentrator Rank 4 of 7 by D. Peel Low price	Filter service life is 20% less than stated for 6 LPM units Uses 3 sieve design - no product tank required Optional serial interface (RS-232)	*not OEM Rebrand of Nidek Nuvo Lite Not on website as of 12/28/2014
Links	http://www.krober.de/site/krober_4_2_e.asp	http://www.krober.de/site/topair2_2_e.asp	http://www.oxy-concentrator.com/html_products/LEGEND-LoveGo-Portable-Oxygen-Concentrator-(HomeCar&Travel-UseMedical-level5-settings)-455.html	http://www.longfei.com/en/products_sclass.asp?bid=1	http://www.longfian.com/en/product/product23.html	http://www.longfian.com/en/product/mid1small01.html	http://www.medicap.de/english/homecare/pr%C3%A9cise-6000/	http://www.imcocalogs.com/longtermcare/advancewebpage.aspx?cg=2838&cd=3
References in literature	NA	Peel (2009)	NA	NA	NA	Peel (2013)	NA	NA
Manual available?	Yes	Yes	No	Yes	No	Yes	Yes	Yes

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Manufacturer	Metran	Nidek	O2 Concepts	Philips Respironics	Philips Respironics	Philips Respironics	Philips Respironics	Philips Respironics
Location	Japan	United States	United States	United States	United States	United States	United States	United States
Device type	Portable	Stationary	Portable	Stationary	Portable	Portable	Stationary	Tank Filler
Device family	KM-X3L	Nuvo	OxLife Independence	EverFlo	SimplyGo	SimplyGo	Millennium M10	UltraFill
Devices	KM-X3L	Nuvo Lite Nuvo 8	NA	EverFlo EverFlo Q	SimplyGo SimplyFlo	SimplyGo Mini	Millennium M10	UltraFill
Release date	Unknown	4/29/2004	4/16/2008	11/15/2006	4/22/2012 (Go)	2015	2/11/2005	Unknown
Retail price (USD)	Unknown	719 (Lite) 1120 (8)	2,399	1852-2395	2995 (Go) 1995 (Flo)	Unknown	1130	695 (Filler only) ~300-400 for each tank
Noise (dBA)	33	40, 48	41-44	40	43	46	50	44
Average power consumption (W)	45	350, 500	NA	350	120	120 (while charging)	600	110
Power efficiency (W/LPM)	45	70, 63	NA	70	60	> 55	60	49
Min oxygen output flow rate	Not specified	0.5	0.5	0.5	0.5	0.22	1	NA
Max oxygen output capacity (SLPM)	1	5, 8	3	5	2	1	10	2.25
Output pressure (psig)	NA	7, 17	4-6	5.7	3 (Go), 6.4 (Flo)	20	10-30	2000 or 3000
Oxygen concentration (%)	87-93	87-95	87-95.6	90-96	87-96	87-96	88-96	90-96
Oxygen sensor	Not specified	optional	standard	optional	standard	standard	optional	standard
Oxygen alarm range(s)	NA	Warning: < 85% (60Hz), 83% (50 Hz)	Alert: < 85% Alarm: < 72%	Low O2 (yellow): 70%-82% Very low O2 (red): < 70%	Not specified	Not specified	Low O2 (yellow): 70%-82% Very low O2 (red): < 70%	< 90%
Alarms	Not specified	Power failure High/low pressure System malfunction High temperature Low flow	Power failure Low O2 Low flow High temperature Maintenance	Power failure System malfunction Low flow Low O2	Power failure Low O2 Low flow Malfunction No breath High breath rate	Power failure Low O2 Low flow Malfunction High breath rate	High/low pressure Power failure Low O2 Low flow	Low O2 Malfunction
Width (inches)	10.6 (26.9 cm)	15.6 (39.6 cm)	8.0 (20.3 cm)	15.0 (38.1 cm)	11.5 (29.2 cm)	8.3 (21.1 cm)	19.0 (48.3 cm)	20.0 (50.8 cm)
Height (inches)	12.6 (32.0 cm)	27.8 (70.6 cm)	12.0 (30.5 cm)	23.0 (58.4 cm)	10.0 (25.4 cm)	9.4-10.2 (23.9-25.9 cm)	27.0 (68.6 cm)	25.5 (64.8 cm)
Depth (inches)	7.5 (19.1 cm)	15.5 (39.4 cm)	8.0 (20.3 cm)	9.5 (24.1 cm)	6.0 (15.2 cm)	3.6 (9.1 cm)	13.0 (33.0 cm)	9.0 (22.9 cm)
Weight	12.8 lb (5.8 kg)	32.0 lb, 14.5 kg (lite) 55.5 lb, 25.2 kg (8)	16.7 lb (42.4 kg)	31.0 lb (14.1 kg)	10.0 lb, 4.5 kg (SimplyGo) 8.5 lb, 3.8 kg (SimplyFlo)	5.0 lb (2.3 kg) standard 6.0 lb (2.7 kg) extended battery	53.0 lb (24.1 kg)	45.0 lb (20.4 kg)
Outlet style and material	Aluminum barb	Metal threads	Aluminum barb	Brass barb	Aluminum barb	Aluminum barb	Plastic threads	NA
Power VAC/Hz input options	Not specified	115/60, 230/50-60	100-240/50-60	120/60, 230/50-60	100-240/50-60	100-240/50-60	120/60	120/60
Battery chemistry	Not specified	NA	Li-Ion	NA	Li-Ion	Li-Ion	NA	NA
Battery life (hours)	2.0	NA	2.5-5.8	NA	0.9-3	9 (extended) @ 0.22 LPM	NA	NA
Battery recharge time (hours)	Not specified	NA	1.5 (single) 2.5 (double)	NA	2-3	4, 8 (extended)	NA	NA
Circuit breaker and/or fuse?	Not specified	Circuit breaker	Neither	Fuse	Not specified	Not specified	Fuse	Not specified
Alarm battery or capacitor?	Not specified	Battery	Not specified	Capacitor	Not specified	Not specified	9V Battery	NA
Filters and time until replacement	Not specified	Coarse filter: weekly cleaning Inlet filter: replace annually or sooner Product filter: replace with compressor service	Air inlet filter: weekly cleaning	Inlet filter: 2 years Micro-disk (bacteria) filter: "as necessary"	Air inlet filter: weekly cleaning Internal bacteria filter	Not specified	Coarse filter: wash weekly HEPA Inlet: 1-3 years Optional pre-inlet filter: replace when worn felt Micro-disk	Bacteria filter: "changed at the provider's discretion"
Operating temperature	Not specified	50°F-100°F (10°C-38°C)	50°F-104°F (10°C-40°C)	55°F-90°F (13°C-32°C)	41°F-104°F (5°C-40°C)	41°F-95°F (5°C-35°C)	55°F-90°F (13°C-32°C)	54°F-90°F (12°C-32°C)
Operating humidity (RH%)	Not specified	95	10-95	95	15-95	15-93	95	20-90
Operating level	Not specified	7,500 ft (2,286 m)	13,123 ft (4000 m)	7,500 ft (2,286 m)	10,000 ft (3,048 m)	10,000 ft (3,048 m)	7,500 ft (2,286 m)	NA
Standard warranty (yrs)	Not specified	3	5 (battery 1)	3	2-5	3	1 (2 optional)	3 (5000 hours)
Other scheduled maintenance	Not specified	Check alarm system Check purity every 15,000 hours (3 years) (> 87%) Replace capacitor with compressor service	None (other than inlet filter)	Check concentration every 2 years No scheduled compressor service: replace as necessary	Not specified	Not specified	Not specified	No periodic maintenance
Certification	JIS-T-7209 (Japan)	FDA K123738 (lite) K093308 (8), ISO 13485:2003, ISO 8359, CE 0413	FAA, FDA K080082, CE	CE, US/Canada, FDA K061261	FAA, FDA K111885, CE	FAA, FDA K111885, CE, ISO 1389	FDA K043006, CE 0459,	IEC 60601, FDA K091191
Continuous or pulse flow	Both	Continuous	Both	Continuous	Pulse	Pulse	Continuous	NA
Trigger sensitivity (cmH2O)	Not specified	NA	0.203	NA	0.195	Not specified	NA	NA
Notes	Not CE marked or FDA approved	Many specs for Nuvo 8	95 WH Battery	Filter does not need to be changed within 2 years. Only 2 filters to maintain RS-232 interface available Alarm capacitor hard-wired to PCA	SimplyFlo is very similar to SimplyGo, but lacks the internal battery	Extended battery is twice the size of regular	Oxygen sensor uses ultrasonic technology	Compatible with: EverFlo, EverFlo Q, Millennium M600 and M605 series, and M10 Regulator: CGA-870 connection Cylinders up to E 2.26 LPM for 2 or 3000 PSI
Links	http://www.metran.co.jp/en/products/38.html	http://www.nidekmedical.com/nuvo-8-specs.php	http://www.o2-concepts.com/	http://www.usa.philips.com/healthcare-product/HCI020000/everflo-home-oxygen-concentrator	http://www.usa.philips.com/healthcare-product/HCI069877/simplygo-portable-oxygen-concentrator	http://www.usa.philips.com/healthcare/product/HCN0CTN350/simplygo-mini-portable-oxygen-system-concentrator	http://www.usa.philips.com/healthcare-product/HCM10600/millennium-m10-oxygen-concentrator	http://www.usa.philips.com/healthcare-product/HCI057100/ultrafill-home-oxygen-system
References in literature	NA	Peel (2009)	NA	Peel (2009)	NA	NA	NA	NA
Manual available?	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Manufacturer	Precision Medical	Precision Medical	Sequal	Sequal	Ultra Electronics	Vbox Inc.	Young Won Medical*
Location	United States	United States	United States	United States	United Kingdom	United States	Korea
Device type	Stationary	Portable	Stationary	Portable (military)	Portable (military)	Portable	Stationary, Assembled
Device family	EasyFlow 5	EasyPulse	Integra, Regalia***	SAROS	mGO	Trooper	HG55
Devices	PM4350 PM4351	POC	9620 9621 9622 6323A	3000	2300	Trooper	HG55
Release date	10/27/2008	7/1/2011	9/10/2004	4/6/2012	12/23/2013	9/21/2012	Unknown
Retail price (USD)	699	3,995	1385	NA	NA	Unknown	Unknown
Noise (dBA)	53	44	60	59	Not specified	43	50
Average power consumption (W)	350	< 60	575	130	Not specified	Not specified	470
Power efficiency (W/LPM)	70	75	58	43	NA	NA	94
Min oxygen output flow rate	0.5	0.2	1	1	1	1 (continuous equivalent)	Not specified
Max oxygen output capacity (SLPM)	5	0.8	10	3	3	5 (continuous equivalent) 1.03 LPM	5
Output pressure (psig)	8	NA	7.5; 7, max 11	4	Not specified	5	7.3-11.6
Oxygen concentration (%)	87-95 (<6500') 85-90 (6501' - 10000')	87-95	88-94	90-96	88-94	> 87	Not specified
Oxygen sensor	optional	No	optional	standard	Not specified	Not specified	standard
Oxygen alarm range(s)	Low O2 (yellow) Very low O2 (red)	NA	Below normal (yellow): 70%-85% Abnormal (red): < 70%	Yellow (Warning): < 85%±3% Red (Abnormal): < 70%±5%	Not specified	Not specified	< 85%
Alarms	High temperature Occluded flow Power failure Low O2 System malfunction	Power failure High/low flow malfunction High temperature Service needed	Power failure High/low pressure Low O2	Loss of power/Hot battery Low battery Low oxygen output No breath detected O2 flow outside normal limits Low 9V battery Unit malfunction	Not specified	Not specified	Power failure Pressure
Width (inches)	12.3 (31.2 cm)	6.5 (16.5 cm)	14.7 (37.3 cm)	4.4 (11.1 cm)	6.0 (15.2 cm)	2.8 (7.1 cm)	15.8 (40.1 cm)
Height (inches)	17.0 (43.2 cm)	10.1 (25.7 cm)	26.0 (66.0 cm)	26.8 (68.1 cm)	27.3 (69.2 cm)	7.3 (18.4 cm)	25.6 (65.0 cm)
Depth (inches)	17.1 (43.4 cm)	4.5 (11.4 cm)	19.1 (48.5 cm)	4.4 (11.1 cm)	7.8 (19.7 cm)	6.0 (15.2 cm)	14.4 (36.6 cm)
Weight	29.6 lb (13.4 kg)	6.8 lb (3.1 kg)	57.0 lb (25.9 kg)	12.3 lb (5.6 kg) w/ battery 10.0 lb (4.5 kg) w/o battery	21.0 lb (9.5 kg) w/ battery	3.8 lb (1.7 kg)	66.1 lb (30.0 kg)
Outlet style and material	Aluminum barb	Barb	Metal threads	Barb	Aluminum barb	Not specified	Not specified
Power VAC/Hz input options	115/60	100-240/50-60	110/60, 220/50	100-240/50-60	100-240/50-60	120-140/Not specified	110/50-60, 220/50-60
Battery chemistry	NA	Li-ion	NA	Li-ion	Li-ion x 2	Li-ion	NA
Battery life (hours)	NA	1.5-4.5	NA	0.5 @ 3 LPM	1.6	3.0-7.0	NA
Battery recharge time (hours)	NA	Not specified	NA	1.5 (up to 80%)	Not specified	2-3	NA
Circuit breaker and/or fuse?	Automatic restart**	Neither	Circuit breaker	Neither	Not specified	Not specified	Not specified
Alarm battery or capacitor?	Not specified	Not specified	Not specified	9V Battery	Not specified	Not specified	Not specified
Filters and time until replacement	Intake muffler/filter: Washable Product filter: Never needs replacement	Inlet filter: washable	Compressor inlet filter: 10,000 hours Cabinet filter: Weekly cleaning HEPA filter:	HEPA: Air exhaust: Air intake: Check daily, clean at least weekly	Dust separator air inlet filter output bacteria filter	Not specified	Not specified
Operating temperature	50°F-95°F (10°C-35°C)	41°F-104°F (5°C-40°C)	50°F-104°F (10°C-40°C)	32°F-109°F (0°C-43°C)	Not specified	Not specified	Not specified
Operating humidity (RH%)	95	Up to 95%	95	10-95 @ 28°C dew point	Not specified	Not specified	Not specified
Operating level	10,000 ft (3,048 m)	9,000 ft (2,743 m)	9,000 ft (2,743 m)	18,000 ft (5486 m)	Not specified	Not specified	Not specified
Standard warranty (yrs)	3 - concentrator 1.5 - compressor	3 (device) 0.5 (battery)	5	1 year or 1000 hours, whichever comes first	1000 hour service life	Not specified	Not specified
Other scheduled maintenance	None specified	None specified	12 months or as needed: verify concentration, clean inside of unit Recommended spare parts (in addition to filters): Compressor (rebuild kit or assembly), Pod (PCB), ATF module, pressure test fitting	Inspection every 6 months or as needed: battery, 9V battery, HEPA filter, ATF compressor, PCB, alarms Cycle battery at least once/month	Not specified	Not specified	Not specified
Certification	ISO 8359, ISO 13485 FDA K072348	ISO 8359, FDA K103563, CE	CE, FDA K042262, ISO 8359	FDA K083163, AWR (Airworthiness Release)	FDA K134023	FAA, FDA K121260	Unknown
Continuous or pulse flow	Continuous	Pulse	Continuous	Both	Both	Pulse	Continuous
Trigger sensitivity (cmH2O)	NA	0.36	NA	0.15-0.45 (Adjustable)	Not specified	< 0.130	NA
Notes	no 230V option Requires alignment tool for service ***Smart Start: Delivers oxygen while waiting to restart its compressor. The patient doesn't have to reset or restart anything. Discrete flow control	15% and 5% battery alarms	***Regalia series seems to be for non-medical use. NA Has on-board computer diagnostics: digitally set max flow, calibrate O2 sensor Back-pressure compensated Backpressure effect, 5.0-~4.83 LPM from 0-~1 PSI ±3% concentration accuracy	Replaces "D" & "H" cylinders Designed for military & harsh conditions (sand/dust) autoSAT Technology: Servo-control to maintain consistent FIO2 Runs on pulse dose, switches to CF if no breath detected Max 40 BPM Brushless DC VPSA	Uses poppet style solenoid valves Ruggedization steps outlined in 510K, compared to iGO baseline	From website: "trooper not available at this time" as of 12/29/2014 Only available in the US	*may not be OEM Rebrand of Canta Medical
Links	http://www.precisionmedical.com/homecare/oxygen-concentrators/pm4351-easyflow5	http://www.precisionmedical.com/homecare/oxygen-concentrators/pm4150-easypulse-poc	http://www.sequal.com/government.php	http://www.sequal.com/government.php	http://www.ultrapals.com/land/mgo/	http://www.trooperoxygen.com/	http://www.medicalexpo.com/prod/young-won-medical-70599.html#product-item_443208
References in literature	NA	NA	Peel (2009)	NA	NA	NA	NA
Manual available?	Yes	Yes	Yes	Yes	Flyer only	Spec Sheet	No