



Vyntus® CPX and Vyntus® ECG metabolic cart and ECG

Vyntus[®] CPX

Technical Specifications



Ergospirometry (physiological measurement)

Parameter	Measurement range	Accuracy
Ventilation (V'E)	0 to 300 L/min	2% or 0.50 L/min
O2 uptake (V'O2)	0 to 7 L/min	3% or 0.05 L/min
CO2 production (V'CO2)	0 to 7 L/min	3% or 0.05 L/min
RER	0.6 to 2.0	4% or 0.04

Volume sensor (physiological measurement)

Parameter	Measurement range	Accuracy
Volume	0 to 10 L	2% or 0.05 L
Flow	0 to 15 L/s	3% or 0.07 L/s
Resolution	3 mL	
Resistance	< 0.1 kPa/L/s at 15 L/s	
ATS	Compliant	

O2 analyser

Type	Fully digital, high speed analyser, based on electrochemical principle
Measurement range	0 to 100 Vol%
Accuracy	0.05 Vol% or 0.2%
Resolution	0.01 Vol%
Typ. rise time (T10-90)*	75 ms
Operating life	Typical 2 years

CO2 analyser

Type	Fully digital, high speed analyser based on principle of infrared absorption
Measurement range	0 to 15 Vol%
Accuracy	0.05 Vol% or 1%
Resolution	0.01 Vol%
Typ. rise time (T10-90)*	75 ms

Ambient measurement

Ambient unit	Measurement range	Accuracy
Temperature sensor	-40 to +85°C (-40 to +185°F)	0.5°C at 20°C (68°F)
Humidity sensor	10 to 95% relative humidity	4% relative humidity
Vyntus CPX	Measurement range	Accuracy
Air pressure sensor	30 to 110 kPa (225 mmHg to 825 mmHg)	0.25 kPa (1.88 mmHg) at 0 to 65°C (32 to 149°F)

Notes

* Rise time after digital filtering. During every gas calibration the filter coefficients are specifically optimized for the sensors.

Canopy module specifications**	
Dilution flow range	25 - 80 L/min
SpO2 sensors	
Displayed oxygen saturation range (SpO2)	0 to 100%
Displayed pulse rate range	18 to 321 beats per minute (BPM)
SpO2 accuracy (arms*)	± 3 digits @ 70 to 100%
Power supply	
Vyntus CPX with Vyntus CART 3.0	
Mains voltage	115 V; 230 V, AC 50/60 Hz
Power input	690 VA
Electrical safety	Protection class I
Vyntus CPX without cart	
Type	Magic Power MPM-X125
Mains input voltage	100 - 240 V, AC 47 - 63 Hz
Power consumption	1.5 - 1 A
Output voltage	24 V DC
Output	120 VA / 5 A
Electrical safety	Protection class I
Moisture protection	
Vyntus CPX with Vyntus CART 3.0	no IP protection
Vyntus CPX without cart	IP 20
Ambient conditions	
Temperature	+10°C to +34°C (+50°F to 93.2°F)
Relative humidity	20 to 80% RH, non-condensing
Ambient pressure	700 to 1060 hPa (525 to 795 mmHg)
Altitude	≤ 3000 m
Classification of applied parts	
Type applied part	B
Category according to MDD 93/42/EEC (2007)	
Complete system	Active class IIa medical product
Pressure reducer	
Type	Test gas pressure reducer
Inlet pressure	200 bar (2901 psi)
Outlet pressure	2 bar fixed (29 psi)
1 outlet	G 1/4 internal screw thread

Notes

* ± 1 Arms represents approximately 68 % of measurements.

** Not available in the US

Dimensions / Weight		
Vyntus CPX module		
Dimensions	33 cm W x 28.5 cm D x 13.5 cm H (13" x 11.2" x 5.3")	
Weight	4.08 kg (8.9 lbs)	
Vyntus CPX with Vyntus CART 3.0		
Dimensions total	61 - 82.5 cm W x 62 cm D x 172 - 197 cm (depending on monitor assembly) (24 - 32.5" x 24.4" x 67.7 - 77.6")	
Weight total	82 kg (180.8 lbs) inclusive CardioSoft ECG, KISS suction unit and 34" curved monitor	
Castors	4 twin swivel castors Ø 10 cm (3.9"), lockable, conductive	
	Number	3
Shelves	Platform area	45 cm W x 36 cm D (17.7" x 14.2")
	Load capacity	20 kg (44 lbs) distributed load
Keyboard drawer with mousepad (left / right)	Keyboard platform area	40 cm W x 20 cm D (15.7" x 7.9")
	Load capacity	3 kg (6.6 lbs) distributed load
	Interior area	34 cm W x 24 cm D x 8 cm H (13.4" x 9.4" x 3.1")
Drawer	Platform area	45 cm W x 36 cm D (17.7" x 14.2")
	Load capacity shelf	15 kg (33 lbs) distributed load
	Load capacity drawer	3 kg (6.6 lbs) distributed load
Tower computer holder with two tension belts	Platform area	10.3 cm W x 6.4 cm D (4.0" x 2.5")
	Load capacity	5 kg (11 lbs)
Monitor mount height adjustable	Range height adjustment	18 cm (7.1")
	Load capacity	8.5 kg (18.7 lbs)
34" curved monitor as dual monitor application	Dimensions	82.5 cm W x 7.3 cm D x 37.2 cm H (32.5" x 3.0" x 14.7")
	Weight	8 kg (17.6 lbs)
Vyntus CPX Canopy option**		
Vyntus Canopy module	Dimensions	17.5 cm W x 25.5 cm D x 11 cm H (6.9" x 10" x 4.3")
	Weight	2.62 kg (5.8 lbs)
Holder for hood	Dimensions	40 cm W x 53 cm D x 28 cm H (15.7" x 20.9" x 11")
	Weight	1.2 kg (2.6 lbs)
Canopy tube	Length	183 cm (72")
Foil	Dimensions	150 cm W x 160 cm D (59.1" x 63.0"), 50 µm thickness
	Material	LDPE, biocompatible
Standards, directives and market clearances		
Standards	EN 60601-1, EN 60601-1-2, EN 62304, EN 62366, EN ISO 14971, EN ISO 10993-1	
Directives	93/42/EEC amended by 2007/47/EC, RoHS 2011/65/EU compliant	
Market clearances	CE for Vyntus CPX and Vyntus CPX Canopy option, FDA 510(k) clearance for Vyntus CPX only	

Vyntus[®] ECG

Technical Specifications



ECG Amplifier, 10 electrodes, 12 leads

Application	ECG recording	
ECG leads	according to Einthoven, Wilson, Goldberger	
Bandwidth	0.05 - 150 Hz digital	
Sampling rate per channel	500 Hz	
Pacemaker detection	4000 Hz	
Resolution	< 2.5 μ V/bit	
Connection to the PC	Wireless, Bluetooth [®]	
Bluetooth [®]	Bluetooth [®] module	Panasonic PAN 1322
	Bluetooth [®] standard	V2.1, class 2 device
	Output power	2.5 dBm, max. 4.5 dBm
	Frequency range	2400 - 2483.5 MHz
	FCC identifier	T7VEBMU
	IC identifier	216QEBMU
Bluetooth [®] QD ID	B021246	
Connection of the electrodes	4 mm snap, gilded	

Dimensions / Weight

ECG housing	Dimensions	9.5 cm W x 8.5 cm D x 2 cm H (3.7" x 3.3" x 0.8")
	Weight	0.2 kg (0.4 lbs)
Length of electrode cables	V1 - V6	60 cm (23.6")
	LL	45 cm (17.7")
	LA / RL	70 cm (27.6")
	RA	80 cm (31.5")

Power supply

Supply voltage	1.5 V DC AA battery or 1.2 V DC AA NiMH rechargeable battery, at least 2500 mAh
Power input (<i>max.</i>)	500 mA
Service life with fully charged battery	at least 6 hours

Moisture protection

Type applied part	IP 20
-------------------	-------

Ambient conditions

Temperature	+10°C to +34°C (+50°F to 93.2°F)
Relative humidity	20 to 80% RH, non-condensing
Ambient pressure	700 to 1060 hPa (525 to 795 mmHg)

Classification of applied parts

Type applied part	CF, defibrillator proof
-------------------	-------------------------

Category according to MDD 93/42/EEC (2007)

Complete system	Active class IIa medical product
-----------------	----------------------------------

Standards, directives and market clearances

Standards	EN 60601-1, EN 60601-1-2, EN 60601-2-25, EN 62304, EN 62366, EN ISO 14971, EN ISO 10993-1
Directives	93/42/EEC amended by 2007/47/EC, RoHS 2011/65/EU compliant
Market clearances	CE, FDA 510(k) clearance



GLOBAL HEADQUARTERS

Vyairē Medical, Inc.
26125 North Riverwoods Blvd
Mettawa, IL 60045
USA

 Vyairē Medical GmbH
Leibnizstrasse 7
97204 Hoechberg
Germany



[vyaire.com](https://www.vyaire.com)

Where applicable - country availability is dependent on the successful product registration with the National Authority of that country. Please read the complete Instructions for Use that come with the products and follow the instructions on the product label. Vyairē pursues a policy of continued improvement in design, production and performance of its products. The right is therefore reserved to vary details at any time and without notice.



Bluetooth is a trademark of Bluetooth SIG, Inc.

©2019 Vyairē. Vyairē, the Vyairē Logo and Vyntus are trademarks of Vyairē Medical, Inc. | VYR-GLB-1900018