Vyntus™ ONE

Pulmonary function testing and cardiopulmonary exercise testing

JAEGER™

Vyntus™ ONE
key features

Designed for Daily Workflow

Adjustable & ergonomic
Left- or right-side arm adjusts to fit every scenario.

Technologist-friendly
Supports seated or standing operation.

Compact integration
Small-footprint barometric pressure and temperature monitoring.

Clear System Confidence

At-a-glance status
Color-coded bars indicate system readiness.

Fast maintenance access
Rear, tool-free O_2 fuel cell replacement.

Efficient & Reliable Operation

One-step calibration
Single gas calibrates all analyzers simultaneously.

All-day stability
Calibration remains valid for the full testing day.

Built to Last

Rugged construction
Designed to withstand frequent cleaning without compromising performance or appearance.

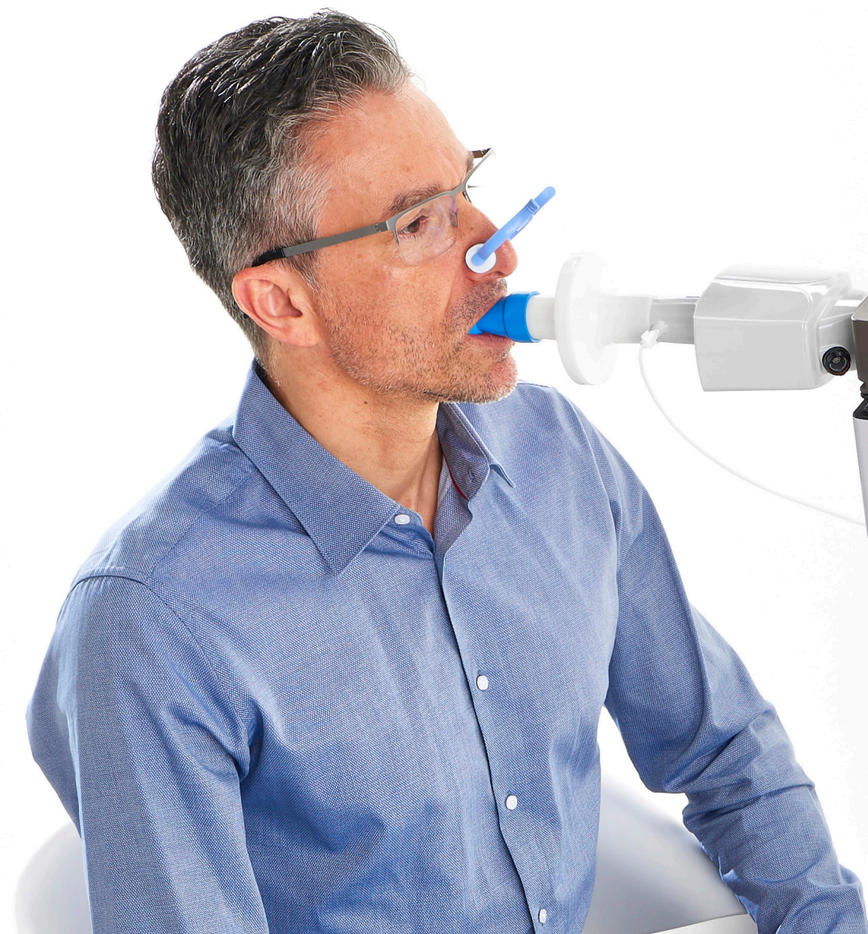
Innovative Breathing Circuit for Accuracy & Comfort

Factory-Calibrated Ultrasonic Flow Sensor
Requires only simple verification.

Dynamic Flow Correction & Double Shot Technology
Enhances measurement accuracy and stability.

Magnetically-Controlled Flow Path Valve
A precise, balloon-free shutter for seamless airflow control.

eDemand Valve
An electronically controlled demand valve that minimizes patient effort, improving comfort and compliance.



The Power of SentrySuite™ Software

SentrySuite™ is designed to be a versatile and user-friendly solution for managing and operating Vyntus™ systems. SentrySuite™ seamlessly navigates the critical stages of the patient, technician, and physician journey during the testing and review processes.

PFT measurement capabilities

- ✓ Complete Spirometry (FVC, SVC, MVV)
- ✓ pre/post Bronchodilator
- ✓ Bronchial Challenge Testing
- ✓ Lung Volumes, FRC by N2 Washout
- ✓ MBW LCI, Snill, Scond, Sacin
- ✓ SB Diffusing Capacity
- ✓ SB Diffusing Capacity, Intrabreath
- ✓ MIP/MEP

Metabolic measurement capabilities

- ✓ CPET, breath-by-breath
- ✓ REE, breath-by-breath
- ✓ ECG, Rest and Exercise

Maintenance and Hygiene

Smartly designed hardware does not utilize balloons or complicated valves. Just a few robust parts, making disassembly and reassembly a snap.

With **MicroGard™** II in use, hygiene routines are only required twice per year (every 6 months).[1]

You can clean or replace. Your choice. Components tolerate manual or automated cleaning and disinfection processes.

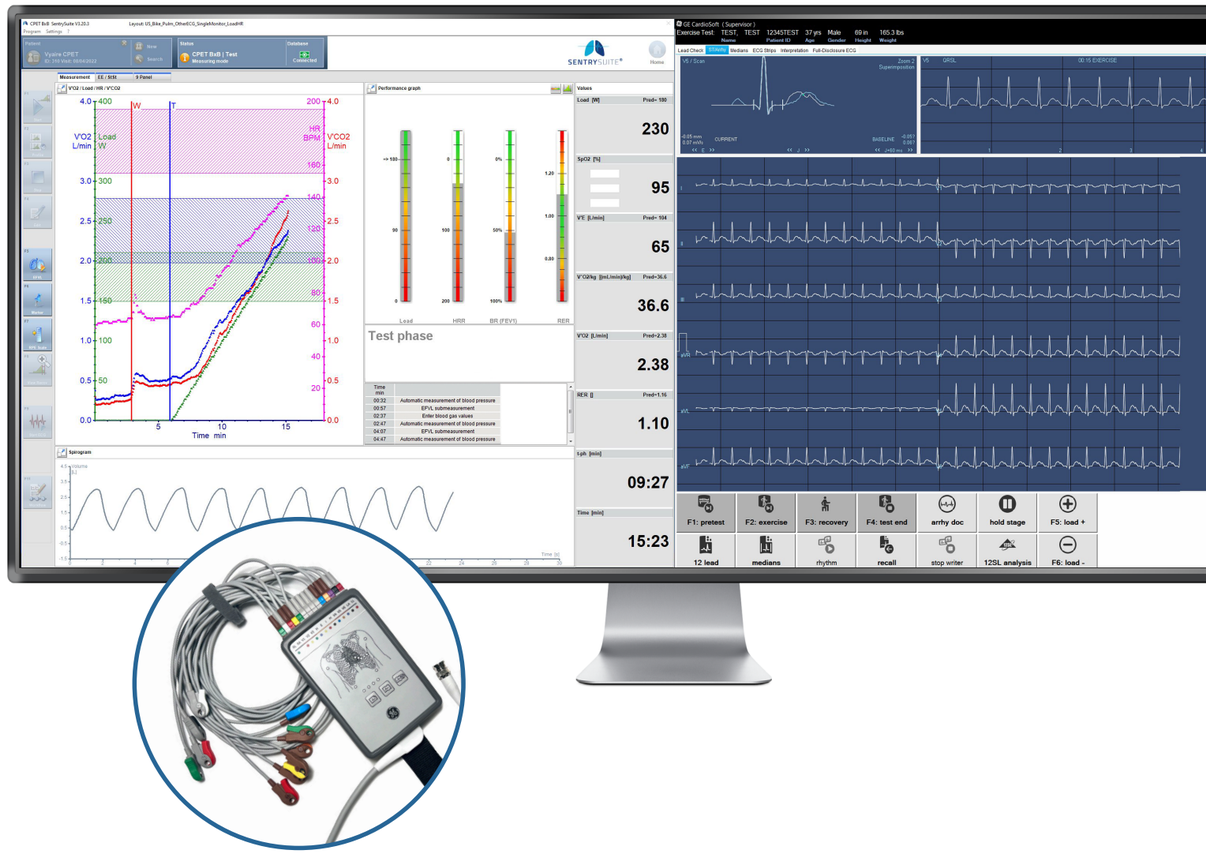
Tool-free O_2 cell notifies when a replacement is needed and typically lasts two years. When it needs changing, it is easy to do with tool-free access. No need for a service call.

Why Add Vyntus™ BODY

Adding a body plethysmograph to your Vyntus™ ONE PFT expands testing capabilities to include FRC plethysmography and airway resistance measurement, improving diagnostic confidence in obstructive and complex cases. It also enables faster, more complete testing on the same platform, helping you evaluate more patients without changing workflows.

Why Add CPET

Upgrade your Vyntus™ ONE PFT to perform both pulmonary function and cardiopulmonary exercise testing on a single system. This enables comprehensive evaluation of cardiac, pulmonary, and metabolic function, supports a broader range of patients, provides actionable physiologic insight, and expands testing services without adding separate equipment or workflows and maximizes your investment.



Technical data

Ultrasonic flow sensor – PFT application		
Flow measurement		
Type	Ultrasound	
Sample rate	1000 Hz, achieved by 2000 ultrasound transit time measurements (double shot technology)	
Range	0 to 18 L/s bidirectional	
Accuracy	Exhalation 0 to 14 L/s: 1.5 % or 0.05 L/s (whichever is greater) Inhalation 0 to 14 L/s: 2.0 % or 0.05 L/s (whichever is greater)	
Total resistance (MicroGard® II filter + USS Module + FPV block eDemand)	< 0.150 kPa*s/L (< 1.53 cmH20*s/L) at 14 L/s	
Dead space USS Module	66 mL	
Volume integration		
Principle	Software volume integration of flow signal (ultrasound)	
Range	30 L (software limited)	
Accuracy	Exhalation and inhalation 0.5 to 14 L/s: 2.5% or 0.075 L (75 mL)	
Precision	1 % or 50 mL (whichever is greater)	
O_2 analyzer		
Type	Fully digital, high speed analyzer, based on electrochemical principle	
Range	0 – 100 vol %	
Accuracy	0.05 vol % or 0.2 %	
Resolution	0.01 vol %	
Service life	2 years	
CO_2 analyzer		
Type	Fully digital, high speed analyzer, based on infrared absorption	
Range	0 – 15 vol %	
Accuracy	0.05 vol % or 1 %	
Resolution	0.01 vol %	
Multigas analyzer (CO/CH_4) – Diffusion measurement		
Type	Infrared	
Range	0 – 0.4 vol %	
Accuracy	0.003 vol % or 2 % relative (whichever is greater)	
Resolution	0.0005 vol %	
Gas exchange CPET (physiological measurement)		
Parameter	**Measurement range**	**Accuracy**
Ventilation (V'E)	0 to 300 L/min	2 % or 0.5 L/min
O_2 uptake ($V'O_2$)	0 to 7 L/min	3 % or 0.05 L/min
CO_2 production ($V'CO_2$)	0 to 7 L/min	3 % or 0.05 L/min

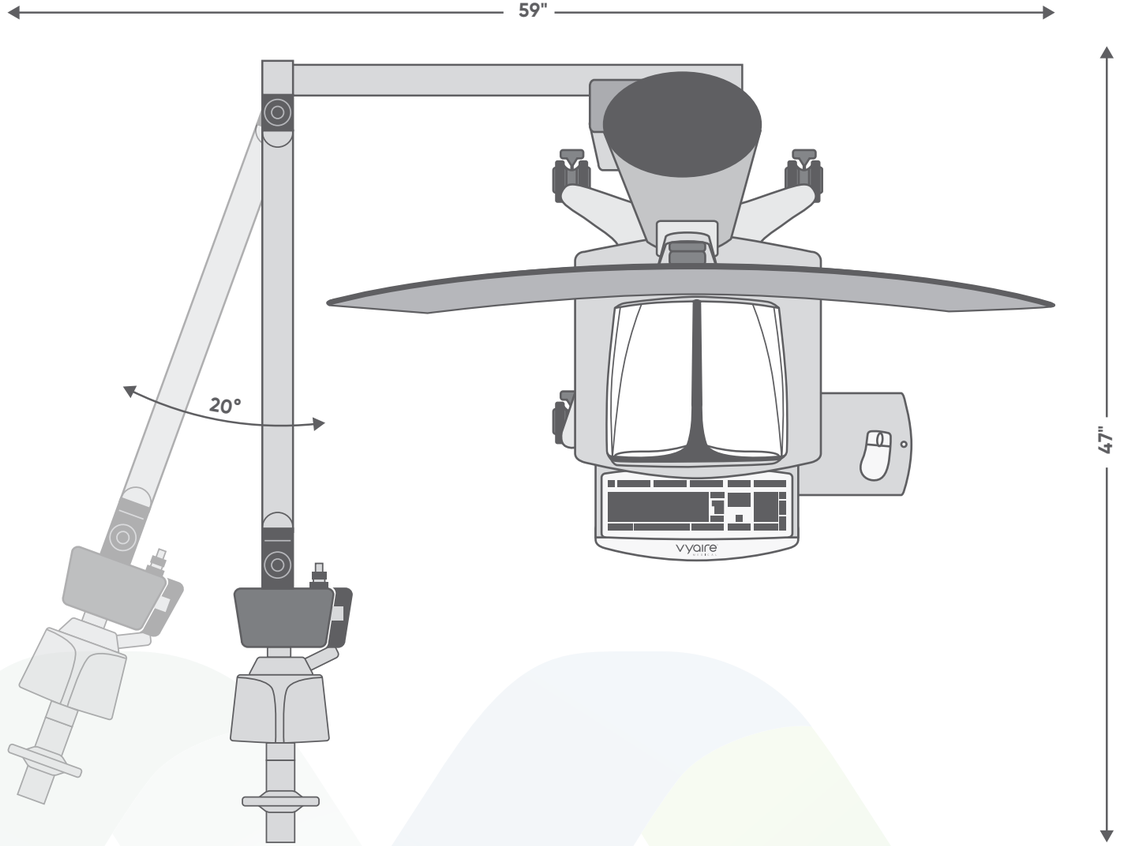
Volume sensor CPET DVT (physiological measurement)		
Type	Flat vane system	
Weight	45 g	
Dead space	30 mL	
Resolution	3 mL	
Resistance	< 0.1 kPa/L/s (0.75 mmHg/L/s) at 15 L/s	
Parameter	**Measurement range**	**Accuracy**
Volume	0 – 10 L	2 % or 0.05 L
Flow	0 – 15 L/s	3 % or 0.07 L/s
Ambient measurement		
Sensor	**Measurement range**	**Accuracy**
Temperature sensor	–10 to 50 °C (14 to 122 °F)	± 0.5 °C at 20 °C (68 °F) ± 1 °C at 10 to 34 °C (50 to 93.2 °F)
Humidity sensor	0 – 100 % relative humidity	4 % relative humidity at 20 – 80 % relative humidity
Air pressure sensor	500 to 1100 hPa (375 to 825 mmHg)	± 2.5 hPa (1.88 mmHg) at 700 to 1060 hPa (525 to 795 mmHg)
Vyntus ECG		
Bandwidth	0.05 – 150 Hz digital	
Sampling rate per channel	500 Hz	
Pacemaker detection	4000 Hz	
Resolution	< 2.5 µV/bit	
Connection to the PC	Wireless, Bluetooth®	
Supply voltage	1.5 V DC AA battery or 1.2 V DC AA NiMH rechargeable battery, at least 2500 m	
Calibration syringe		
Volume	3 L	
Accuracy	± 0.4 %	
Dimensions / Weight		
Vyntus CART standard cart		
Dimensions total	145 cm W × 118 cm D × 175 cm H (57.1″ × 46.5″ × 68.9″)	
Weight total	82 kg (180.8 lbs) inclusive 27″ LCD monitor	
Shelves	Number	2
	Load capacity	20 kg (44 lbs) distributed load
Keyboard drawer with mousepad (left/right)	Keyboard platform area	40 cm W × 20 cm D (15.7″ × 7.9″)
Mechanical height adjustment for keyboard/mouse and monitor	Range	30 cm (11.81″)
Mains voltage	115 V AC/230 V AC, 50/60 Hz	
Power input	690 VA	
Electrical safety	Protection class I	
Monitor mount	Load capacity	8.5 kg (18.7 lbs)

Dimensions / Weight (Cont.)		
Mobile Cart		
Dimensions total with arm	96 cm W × 73 cm D × 117 cm H (37.8″ × 28.7″ × 46.1″)	
Weight total	131.5 lbs. (59.8 kg)	
Drawer	Number	1
Shelf	Number	1
	Load capacity	10 kg (22 lbs) distributed load
Gas bottle mount	Load capacity	3 × 6.5 kg (14.3 lbs)
	Bottle diameter	max. 111 mm
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 (600 to 795 mmHg)	
Altitude	IP 20	
Moisture Protection		
Vyntus ONE	IP 20	
Ultrasonic sensor (USS Module)	IP 67	
Vyntus carts (standard and mobile)	No IP protection	
Vyntus ECG	IP 20	
Classification of applied parts		
Vyntus ONE	Applied Part Type B	
Vyntus ECG	Applied Part Type CF, defibrillator proof	
Risk Class according to Regulation (EU) 2017/745 (MDR)		
Complete system	Active class IIa medical product	
Operating mode		
Complete system	Continuous operation	
Standards, directives and market clearances		
Standards	EN 60601-1, EN 60601-1-2, EN 60601-2-25 (for Vyntus ECG only), EN 62304, EN 62366-1, EN ISO 14971, EN ISO 10993-1	
Directives	Regulation (EU) 2017/745 (MDR), RoHS 2011 / 65 / EU compliant	
Market clearances	CE, FDA 510(k) clearance	

Required Space

Vyntus® ONE with standard cart

Space requirements: 150 × 120 cm (59″ x 47″)



ATS/ERS Guideline Implementation

Your base for high quality results

- ATS/ERS 2019 spirometry standards[2]
- ATS standardized PFT reports[4]
- ATS/ERS 2017 diffusion standards[3]

REFERENCES

1. Based on the Bio Burden DIN EN ISO 11737-1: Repor t 18AA0193.
2. Graham B, Steenbruggen I, Miller M, et al. Standardization of spirometry 2019 update. An official american thoracic society and european respiratory society technical statement. Am J Respir Crit Care Med. 2019; 200:e70-e88.
3. Graham BL, Brusasco V, Burgos F, et al. 2017 ERS/ATS standards for single-breath carbon monoxide uptake in the lung. Eur Respir J 2017; 49: 1600016.
4. Culver BH, Graham BL, Coates AL, Wanger J, Berry CE, Clarke PK, et al.; ATS Committee on Proficiency Standards for Pulmonary Function Laboratories. Recommendations for a standardized pulmonary function report: an Official American Thoracic Society technical statement. Am J Respir Crit Care Med 2017;196: 1463–1472.Culver et al., 2017.

SentrySuite version 3.20 or higher

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