

Technical Specification

CPX System

- Compact stress testing system for precise and reliable determination of cardiorespiratory and resulting parameters such as, for example: VO_2 , VCO_2 , RER, VEO_2 , $VECO_2$, $PETO_2$, $PETCO_2$, VE, VT, BF, BR etc. which is suited for all groups of patients. ECG option included: HR, HRR, O_2 -Pulse, etc.
- Determination of Flow-Volume Loop at rest and during exercise including curve superimposition, modification and determination of EELV or IC
- Breath-by-Breath and Intra-breath data collection
- Automatic or semiautomatic interpretation program acc. to Wasserman (decision tree method)

Delivery

- Compact housing including O_2 and CO_2 analyzer
- Ventilation measurement by precise, bidirectional, digital volume sensor (TripleV)
- 12-lead PC-ECG (Option)
- Pulse oximeter with finger clip and ear clip
- Modern design trolley including isolation transformer
- Calibration gas cylinder (Option) and pressure reducer
- Ambient module for temperature and pressure determination
- Unit for automatic volume and gas calibration
- Complete set of accessories including mask and mouthpieces
- Pentium computer, MS Windows XP/7, TFT monitor, color printer
- Interfaces for connection of external equipment such as bicycle ergometer, treadmill ergometer, pulse oximeter, external ECG's like CardioSoft from GE, Custo, Amedtec and Norav (Option)

Technical Data

- Volume/Gas measurement

	Range	Accuracy
Ventilation (VE)	0 - 300 L/min	2% or 0.05 L/min
O_2 uptake (VO_2)	0 - 7 L/min	3% or 0.05 L/min
CO_2 release (VCO_2)	0 - 7 L/min	3% or 0.05 L/min
RER:	0.6 - 2.0	4%

- Volume sensor

Type	TripleV (flat fan)	
Volume	0 to 10 L	
Accuracy	50 ml or 2%	
Resolution	3 mL	
Flow	0 to 15 L/s	
Accuracy	70 ml/s or 3%	
Resistance	< 0.1 kPa/L/s at 15 L/s	
Deadspace	30 mL	
Weight	45 g	

- O_2 analyzer (based on the electrochemical principle)

Range	0 - 25%	25 - 100%
t_{90}	80 ms (after filtering)	80 ms (after filtering)
Accuracy	0.05 vol%	0.2 vol%
Resolution	0.01% O_2	0.04% O_2

- CO_2 analyzer (based on the principle of thermoconductivity)

Range	0 - 10%
t_{90}	80 ms (after filtering)
Accuracy	0.05 vol%
Resolution	0.005% CO_2

- Ambient and transport conditions

Temperature	-10 to +34°C
Barometric pressure	700 to 1060 mbar
Humidity	15 to 95% (non-condensating)

Europe:

CareFusion Germany 234 GmbH
Leibnizstrasse 7
97204 Hoechberg
+49 931 4972-0 tel
+49 931 4972-423 fax



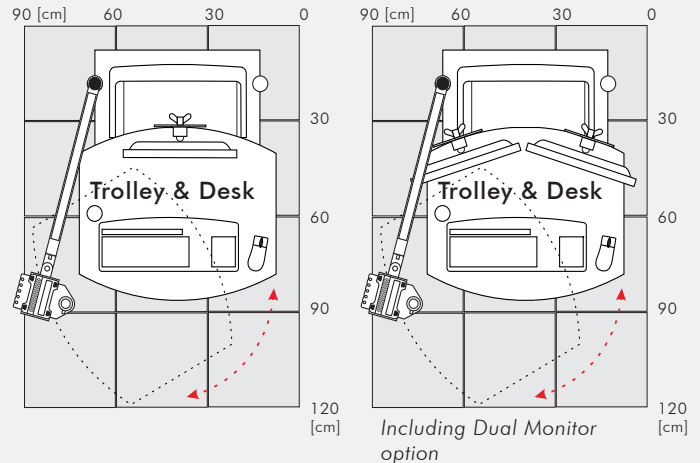
USA:

CareFusion Respiratory Care
22745 Savi Ranch Parkway
Yorba Linda, CA 92887
+1 714 283 2228 tel
+1 714 283 8493 fax

Dimensions

MasterScreen CPX, standard version

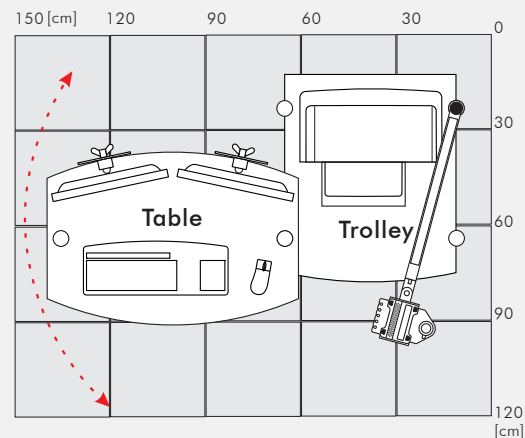
- Trolley with swivel-mounted, adjustable desk: 60 x 66 cm (23.6 x 26 inches)
- Required space: 90 x 120 cm (35.5 x 47.25 inches)



Dimensions

MasterScreen CPX, lateral desk version

- Trolley: 60 x 66 cm (23.6 x 26 inches)
- Swivel-mounted, adjustable desk with leg: 80 x 55 cm (31.5 x 21.7 inches)
- Required space: 150 x 120 cm (59 x 47.25 inches)



Quality and Safety

- CareFusion is certified according to ISO 9001/IEC 13485
- MasterScreen CPX complies with the regulations of European (Medical Device Directive) and US (FDA) law.
- MasterScreen CPX is 3rd Edition conform (EN 60601-1: 2006).



MasterScreen CPX Overview

Hardware	
O ₂ /CO ₂ Analyzer	●
Digital Volume Sensor (TripleV)	●
Pulse Oximeter	●
PC	●
Color Ink-jet Printer	●
TFT Monitor	●
Dual Monitor	○
Design Trolley	●
Lateral Desk	○
Pressure Reducer	●
Unit for Automatic Volume Calibration	●
Manual Calibration Pump	○
Unit for Automatic Gas Calibration	●
Ambient Module	●
Analog Input and Output	○
12-Lead ECG	○
Suction Unit	○
Polar Belt	○
Standard Programs	
Patient Data	●
Automatic Volume Calibration	●
Automatic Gas Calibration	●
Ambient Conditions	●
Spirometry/Flow-Volume	●
Off-line Blood Gases/Lactate	●
Breath-by-Breath	●
Intrabreath	●
Predicted Value Editor	●
High/Low FiO ₂	○
Indirect Calorimetry	●
ECG at Rest and During Exercise	○
Screen/Printer Report	●
Excel Output	●
PDF Report	○
Ergometer Control	●
Interpretation Program	
IntelliSupport	●
Cardiac Output	
Calculated acc. to Wasserman	●

● Standard ○ Option

MasterScreen CPX can be expanded by the following options:

- Dual Monitor
- 12-lead ECG
- Suction unit
- Heart rate measurement with Polar belt
- Treadmill or bicycle ergometer



- MasterScreen CPX: Full-featured exercise testing unit including the following options: ECG, suction unit, lateral desk, Dual Monitor and bicycle ergometer VIAprint™ 150P



- MasterScreen CPX: Full-featured exercise testing unit including the following options: ECG, suction unit and bicycle ergometer VIAprint™ 150P

Performance Features:

- Modern design
- Automatic volume and gas calibration
- Integrated, optional 12-lead ECG
- Breath-by-Breath and Intrabreath measurement
- New, user-friendly interface; background either in blue or sand color
- Comprehensive standard equipment
- IntelliSupport-based interpretation
- Indirect calorimetry
- Training and nutrition reports
- Cardiac Output
- Meets or exceeds all international guidelines