



Applicable standards	IEC 60601-1:2005 + Amd1:2012 EN 60601-1-2: 2015 ISO 26782: 2009 ISO 23747: 2015 ATS/ERS: 2005, 2019 update ISO 80601-2-61: 2017
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Technical specification

Width	49.7 mm
Length	142 mm
Thickness	26 mm
Weight	65 g

Turbine



Reusable turbine
(code 910002)



Disposable turbine
(code 910004)

Supply voltage 5 V d.c. USB connection

Rated electrical power 0.25 W
Rated input current 50 mA max

Backup battery voltage none
Connectivity USB 2.0
Display none

Mouthpieces Ø 30 mm (1.18 inch)
IP protection level IPX1
Type of electrical protection Class II device

Safety level for shock hazard Type BF Apparatus

Conditions of use Apparatus for continuous use

Storage conditions Temperature: MIN -20 °C, MAX +60 °C
Humidity: MIN 10% RH; MAX 95%RH

Operating Conditions Temperature: MIN +10 °C, MAX +40 °C
Humidity: MIN 10% RH MAX 95%RH

Memory capacity database PC software
PC software winspiroPRO

Spirometry

Flow sensor bi-directional digital turbine
Volume range 10 L
Flow range ±16L/s
Volume accuracy (ATS 2019) ±2.5% or 50 mL

Flow accuracy ±5% or 200 mL/s
Dynamic resistance <0.5 cm H₂O/L/s
Temperature sensor semiconductor (0-45°C)
Test available FVC, VC, IVC, MVV, PRE-POST
Measured parameters FVC, FEV1, FEV1/FVC%, FEV3, FEV3/FVC%, FEV6, FEV1/FEV6%, PEF, FEF25, FEF50, FEF75, FEF2575, FET, ELA, EVOL, FIVC, FIV1, PIF, FIV1/FIVC%, PIF, IRV, VC, IVC, IC, ERV, FEV1/VC%, VT, VE, Rf, t_i, t_E, t_i/t_{TOT}, VT/t_i, MVV

Oximetry (optional)

Measurement method Red and infrared absorption
SpO₂ range 0-99%
SpO₂ accuracy ± 2% between 70-99% SpO₂
Average number of heart beats for the %SpO₂ calculation 8 beats
Pulse Rate range 30-300 BPM
Pulse Rate accuracy ± 2BPM or 2% whichever is greater
Average interval for the calculation of cardiac pulse 8 seconds
Signal quality indication 0 - 8 segments on display
Test available spot
Measured parameters SpO₂% min, max, average
BPM min, max, average
Test duration
% Bradycardia Duration (<40 BPM)
% Tachycardia Duration (>120 BPM)
% of Time with SpO₂ ≤ 90% (T90%, T89%)

Certificates & Registrations

CE 0476	MED 9826
FDA 510 (k)	K 122384
Health Canada	71191 (class II)
CND code	Z12150102
GMDN code	13680
Ministry of Health	678828/R