

## PORTACOUNT® Plus Model 8020 Respirator Fit Tester



### PORTACOUNT Plus Features

- Computes respirator fit factor using microscopic particles in ambient air
- Measures fit factors to greater than 10,000
- Tests any respirator type with a tight fitting facepiece, including disposables
- Includes FitPlus™ Fit Test Software for automating the fit test
- Set pass/fail level from the keypad
- Set number of exercises from the keypad
- Digital display indicates the exercise number in progress
- Direct readout of fit factor
- Optional sampling adapters allow employees to be tested in their own respirators
- Compatible with the new N95-Companion for fit testing Series 95 disposable respirators

### Software Features

FitPlus Software is included with every PORTACOUNT Plus.

- OSHA-compliant fit test protocol
- Pre-loaded for compliance with OSHA, ANSI and international fit test protocols
- User-definable pass/fail level
- Real-time fit factor display
- Search for, retrieve, view on screen and print individual test records
- Large on-screen exercise descriptions enable you to "oversee" the test from a distance
- Customize your own report formats
- Optional fit test card printer

### Included with the Instrument

- Carrying case
- AC adapter
- Alcohol supply (enough for approximately 500 hours of operation)
- FitPlus Fit Test Software on CD
- Operation and service manual
- Training video
- Computer interface cable



*Model 8028 PORTACOUNT Universal Fit Test System  
PORTACOUNT Plus Model 8020 and N95-Companion  
Model 8095 together let you fit test any tight-fitting respirator.*



## Optional Accessories

- Model 8095 N95-Companion (for fit testing series-95 disposable respirators)
- Model 8901 Fit Test card printer
- Model 8026 Particle Generator (included with N95-Companion)
- Sampling adapters for select respirator models

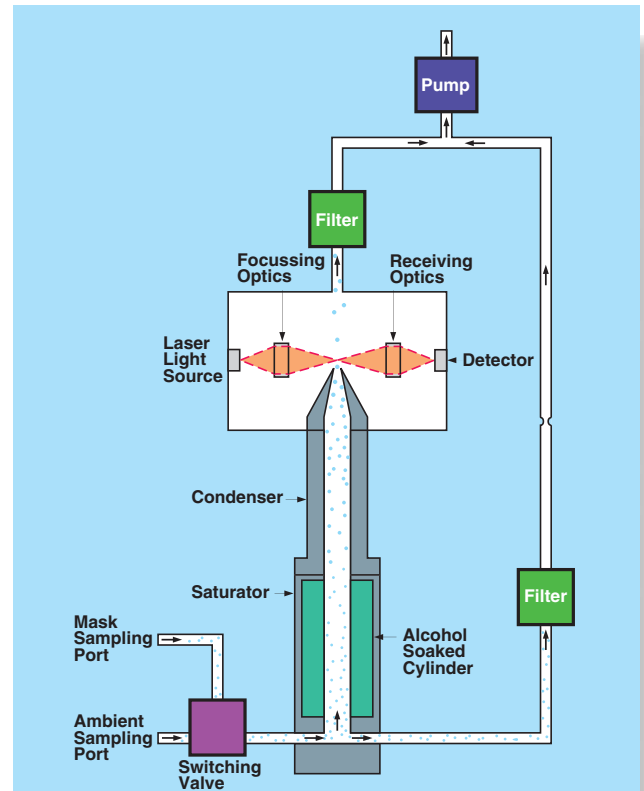
## Specifications

### PORTACOUNT Plus Model 8020 Respirator Fit Tester

Fit Factor Range	1 to greater than 10,000
Concentration Range	0.01 to $5 \times 10^5$ particles/cm <sup>3</sup>
Particle Size Range	0.02 to greater than 1 micrometer
Typical Fit Factor Accuracy	±10% of reading
Respirator Facepieces That Can Be Fit Tested	Full-face elastomeric Half-face elastomeric NIOSH series-100 filtering-facepiece NIOSH series-99 filtering-facepiece NIOSH series-95 filtering-facepiece*
Fit Factor Measurement Size	Direct measurement of fit factor ( $C_{out} / C_{in}$ )** 9.5 in. × 7.5 in. × 5.5 in. (24 cm × 19 cm × 14 cm)
Weight	
Unit Only	3.3 lb (1.5 kg)
With Standard Accessories and Case	13 lb (5.9 kg)
Power	Autosensing 100 to 250 VAC, 50 to 60 Hz
Flow Rate	
Sample	100 cm <sup>3</sup> /min
Total	700 cm <sup>3</sup> /min (nominal)
Temperature Range	
Operation	32 to 100°F (0 to 38°C)
Storage	-40 to 160°F (-40 to 70°C)
Alcohol	
Hours Per Charge	8 hours at 70°F (21°C)
Alcohol Type	99.5%+ reagent grade isopropyl
RS-232 Output	
Baud Rate	User-selectable: 300, 600, 1200, 2400, 9600 (factory set at 1200)
Carrying Case	
Size	21 in. × 14 in. × 8.3 in. (53 cm × 36 cm × 21 cm)
Pass/Fail Setting	User-selectable: 0, 100, 250, 500, 1000, 1250, 1667, 2000, 4000, 5000, 6667, 10000 (other values can be programmed by user)
Factory Recalibration Interval	One year
Warranty	Two years on workmanship and materials

\* N95-Companion accessory required for series-95 only.

\*\*Mask leakage is measured simultaneously while test subject moves and breathes.



### How the PORTACOUNT Plus Works

The PORTACOUNT Plus measures the particle concentration inside and outside the respirator and calculates a fit factor, the ratio of the two measurements. As with any aerosol-based quantitative fit testing technique, the respirator must be equipped with high efficiency filters. Since few particles penetrate a high efficiency filter, any found inside the respirator can be attributed to face seal leakage.

Particles entering the PORTACOUNT Plus pass through a saturator tube where they are combined with alcohol vapor. They then pass into a condenser tube where alcohol condenses on them, causing each to grow into a larger droplet. The droplets then pass through a focused laser beam, producing flashes of light which are sensed by a photodetector. The particle concentration is determined by counting the light flashes.

This unique single particle counting capability differentiates the PORTACOUNT Plus from all other fit testing techniques or instrumentation. The PORTACOUNT Plus detects lower concentrations of particles, up to several orders of magnitude lower, than other methods. Thus, it will operate with ambient aerosol, eliminating the need for high concentrations of aerosol generated in a tent or chamber.

### Minimum PC Hardware Requirements for FitPlus Fit Test Software

Microsoft® Windows 2000, XP

RS-232 serial port or USB-to-Serial Converter



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