

HEAD-TO-HEAD – PORTACOUNT FIT TESTERS VS THE COMPETITION

TWO QUANTITATIVE APPROACHES TO
RESPIRATOR FIT TESTING

DARE TO COMPARE!

	PortaCount Pro+ 8038 CNC Testing Method (Condensation Nuclei Counting/ Ambient Particle Counting)	PortaCount Pro 8030 CNC Testing Method (Condensation Nuclei Counting/ Ambient Particle Counting)	Competition CNP Testing Method (Controlled Negative Pressure)
Fit tests half face and full face elastomeric respirators	✓	✓	✓
Typical time for one OSHA fit test*	Approximately 7 minutes 15 seconds each	Approximately 7 minutes 15 seconds each	Reportedly 4 minutes 30 seconds but highly variable**
Correlation between device fit factor and actual exposure (NIOSH Study)***	78%	78%	36%
Directly measures fit factor	✓	✓	— (estimated)
Actions like moving, talking and breathing are allowed during fit measurement, simulating workplace activity	✓	✓	—
Real-time fit factor data, improving training and simplifying testing	✓	✓	—
Automated testing steps allow the operator to assist the next person, while a test is in progress	✓	✓	—
Interactive touchscreen interface for stand-alone mode	✓	✓	—
Fit test filtering facepiece respirators (N95s)	✓	—	—
Quantitatively fit test ANY respirator types for OSHA 19.10.134 OR NFPA 1500 compliance and standards	✓	—	—
Flexibility to upgrade anytime if fit testing standards or your conditions change			—



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* OSHA Respiratory Protection Standard 29CFR 1910.134 Appendix A.

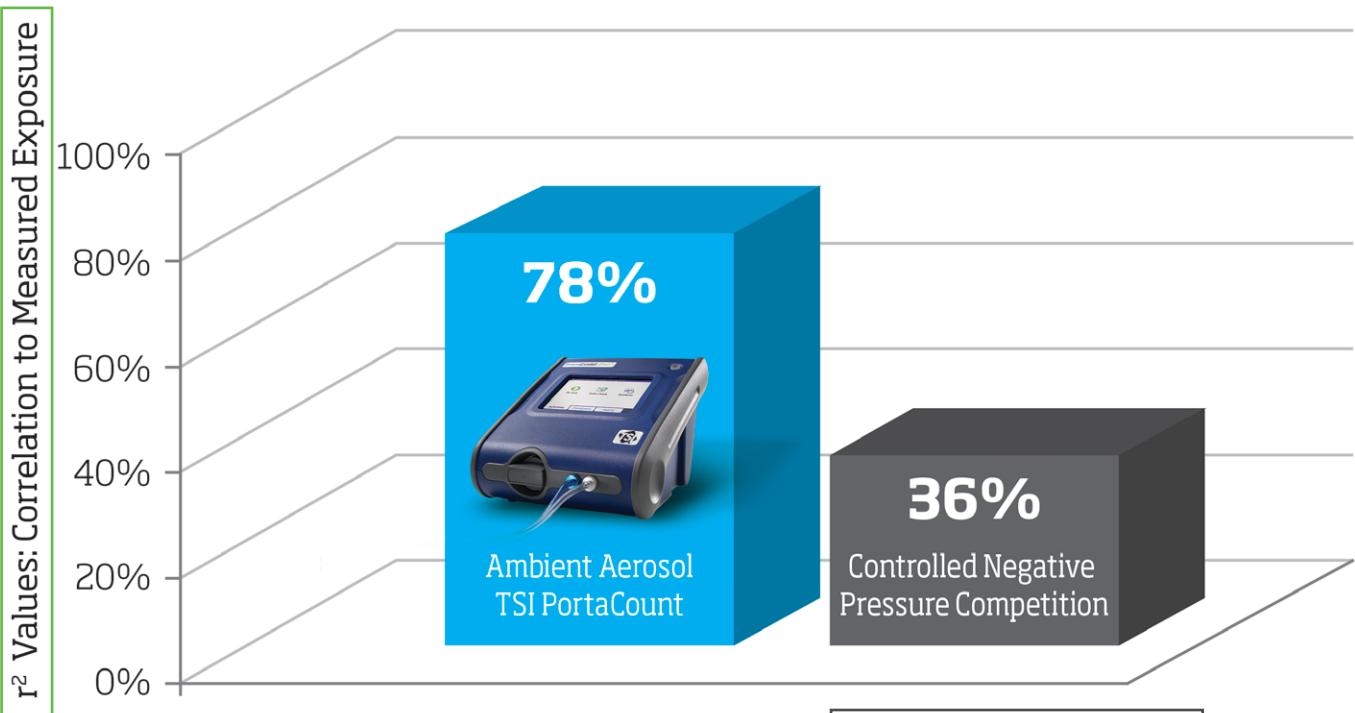
** Actual time for CNP fit test using OSH REDON Protocol depends on test subject's ability to hold breath properly and how fast he/she can remove and redon mask two times resulting in highly variable testing times, usually taking longer than what is claimed.

*** Correy, C.C., D.L. Campbell, W.R. Myers, Z. Zhuang, and S. Das: "Comparison of Six Respirator Fit-Test Methods with an Actual Measurement of Exposure in a Simulated health Care Environment: Part II - Method Comparison Testing," American Industrial Hygiene Assoc. Journal, 59:862-870 (December, 1998)

QUANTITATIVE FIT TESTING COMPARISON

NIOSH STUDY COMPARING FIT TEST FACTORS TO MEASURED EXPOSURE LEVELS

For all methods except the controlled negative pressure method a statistically significant correlation was found between exposure use and method fit factor.



A LARGER PERCENTAGE ILLUSTRATES HOW WELL THE INSTRUMENT FIT FACTOR CORRELATES TO ACTUAL EXPOSURE.

Coffey C.C., D.L. Campbell, W.R. Myers, and Z. Zhuang: Comparison of Six Respirator Fit Test Methods with an Actual Measurement of Exposure in a Simulated Health-Care Environment: Part II - Method Comparison Testing. Am. Ind. Hyg. Assoc. J. 59:862-870 (1998).

"One disadvantage of the CNP technique is that the leak flow is determined at a predetermined negative pressure. Even the same type of cartridges and filters produce different negative pressures inside the respirator cavity... Another disadvantage is that the tests cannot be performed while the wearer exercises and breathes normally."

Han, Don-Hee; Willeke, Klaus; Colton, Craig E; Quantitative Fit Testing Techniques and Regulations for Tight Fitting Respirators: Current Methods Measuring Aerosol or Air Leakage, and New Developments; AIHA journal, (58) pg 219-228, Mar 1997.



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