HEAD-TO-HEAD — PORTACOUNT FIT TESTERS VS. THE COMPETITION

TWO QUANTITATIVE APPROACHES TO RESPIRATOR FIT TESTING

CNC vs. CNP TESTING METHOD

	PortaCount 8048 CNC Testing Method (Condensation Nuclei Counting/ Ambient Particle Counting)	**PortaCount 8040** CNC Testing Method (Condensation Nuclei Counting/ Ambient Particle Counting)	**OHD Quantifit®** CNP Testing Method (Controlled Negative Pressure)
Time for one OSHA fit test[1]	2 minutes 29 seconds each	2 minutes 29 seconds each	4 minutes and 45 seconds but highly variable[2]
Fit tests half-face and full-face elastomeric respirators	✓	✓	✓
Fit factor measurement's correlation to actual exposure (NIOSH Study)[3]	78%	78%	36%
Directly measures fit factor	✓	✓	Measurement is an estimate, not a measurement
FitCheck Mode™ or real time mode for training and fitting respirators	✓	✓	–
Measures fit during action (ex. moving, talking and breathing)	✓	✓	–
In-test video animations lead staff through test exercises	✓	✓	–
Software optimized to work with touch screen tablets[4]	✓	✓	–
Interactive trouble shooting guide	✓	✓	–
Fit test all N95 filtering facepiece respirators	✓	–	–
Quantitively test ANY respirator regardless of type	✓	– (only ≥99%)	–
Upgrade your instrument if standards or your needs change	**Upgrade anytime** if your needs or testing standards change!		–

1 OSHA Respiratory Protection Standard 29CFR 1910.134 Appendix A.
2 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 .
3 Coffey, C.C., D.L. Camplbell, 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)
4 Windows® PCs and tablets only

TSI® UNDERSTANDING, ACCELERATED

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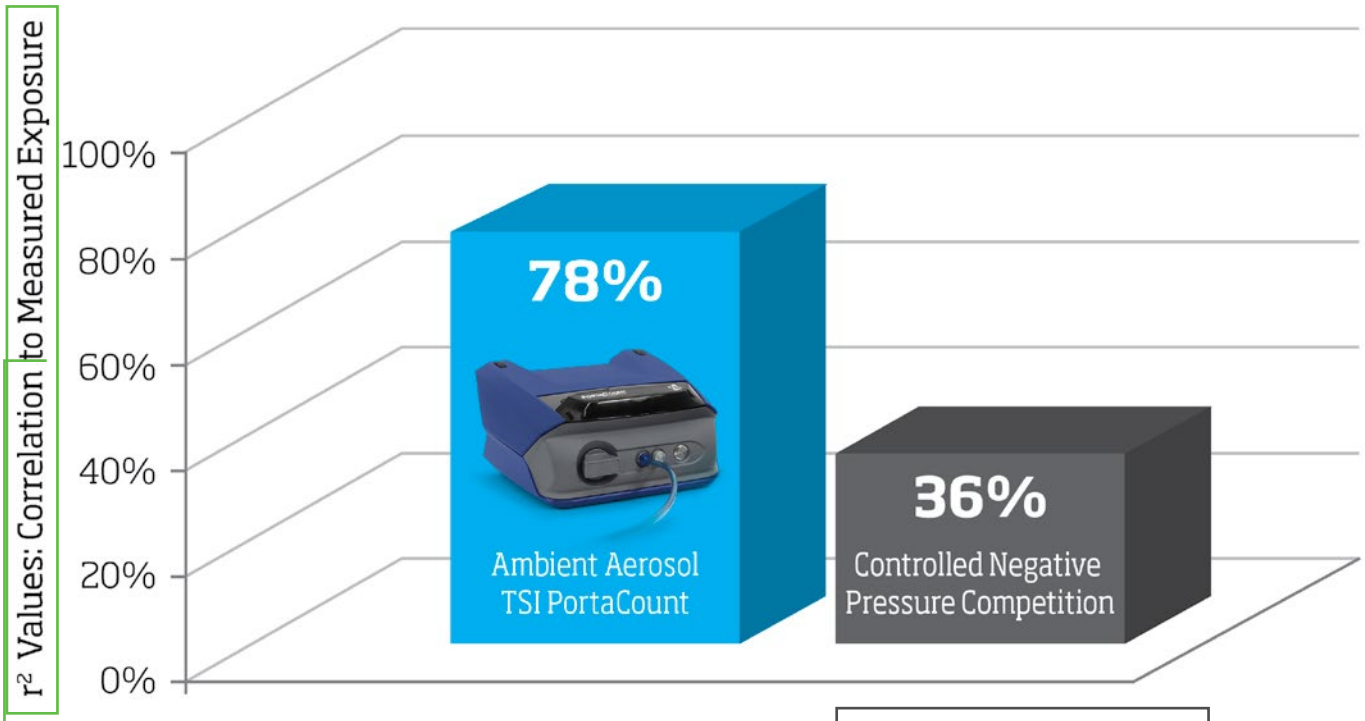
QUANTITATIVE FIT TESTING COMPARISON

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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