



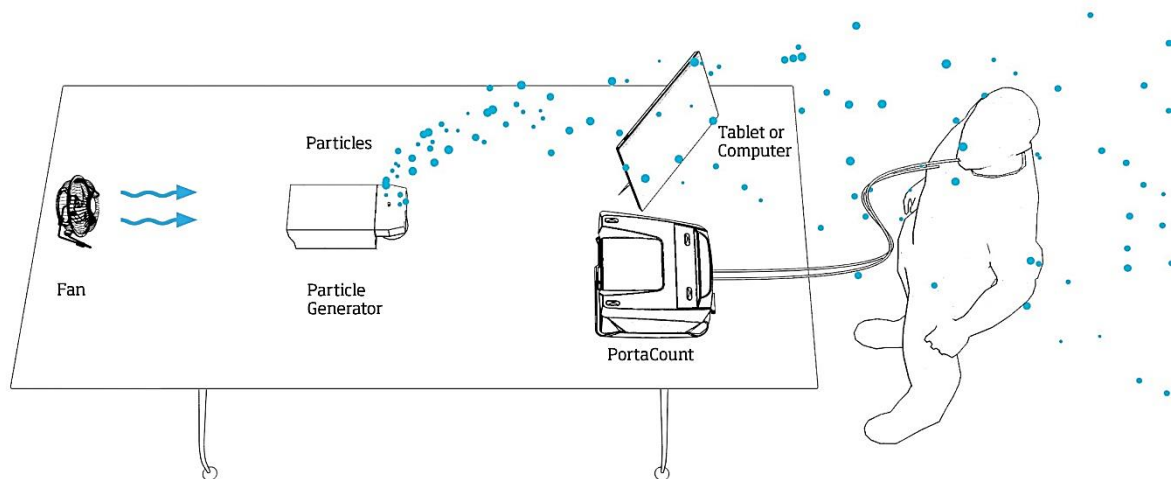
# PORTACOUNT<sup>®</sup> RESPIRATOR FIT TESTER

APPLICATION NOTE RFT-028 (A4)

In some fit test settings, where HVAC systems use high efficiency filters, ambient particle concentrations may be low making it problematic to perform fit testing with PortaCount<sup>®</sup> Respirator Fit Testers. The minimum recommended particle counts are as follows:

Model	Minimum Concentration	Ideal Concentration Range
8030	1000 particles/cc	1,500 to 8000 particles/cc
8040	350 particles/cc	1,000 to 8000 particles/cc
8038/8048	30 particles/cc	200 to 800 particles/cc

When particle concentration is too low, the TSI Model 8026 Particle Generator is recommended. The 8026 will increase particle concentration in the testing room. However, in some instances it has been observed that the output of the 8026 is removed too quickly by the room's dilution ventilation (HVAC) system. The particle output from the 8026 is removed very quickly though the room's HVAC exhaust. In these cases, TSI recommends the use of an auxiliary fan to disperse the particles to the area of the fit testing station.



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## Auxiliary Fan Details

As shown in the diagram above, the fan should be placed between 1 to 3 feet from the output of the 8026 Particle Generator and pointed towards the test subject. The fan should be small and capable of a very low flow rate (more air flow is not better). Typically, a good fan size to use is 3" to 5" in diameter and 30 to 60 cfm.

**NOTE:** Many small fans are not rated for cfm. Stay under 5" diameter.

The air flow from the fan should be barely felt, more of a "billowing" type of flow rather than a strong directed flow.

When placing and aiming the fan, set the PortaCount Fit Tester in count mode and move the 8026 Particle Generator and fan in various positions until a satisfactory count is reached.

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## 8026 Aerosol Generator Setup

In some instances the Aerosol Generator does not output enough particles to meet your needs. Increasing the amount of salt put into the generator can solve this issue. One salt tablet is recommended under typical conditions. If the particle counts cannot be reached with the auxiliary fan, try adding more salt tablets.



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