



Opti-Lok™ Testing

In Partnership with



The background image shows a large, multi-story brick and stone building, identified as the Novant Health Main Entrance. The building has a modern architectural style with large windows and a prominent entrance canopy. The sign above the entrance reads "NOVANT HEALTH" in large blue letters and "MAIN ENTRANCE" in smaller white letters. The foreground is a well-maintained lawn with several trees and shrubs. The sky is clear and blue.

GPS Air and **Novant Health** partnered to test our new **filter-enhancing** product in an effort to **improve indoor air quality**.

Our ultimate goal from this testing was to understand the efficacy of Opti-Lok in a real-world environment, and the levers to pull in order to optimize the technology.



Real-World Testing

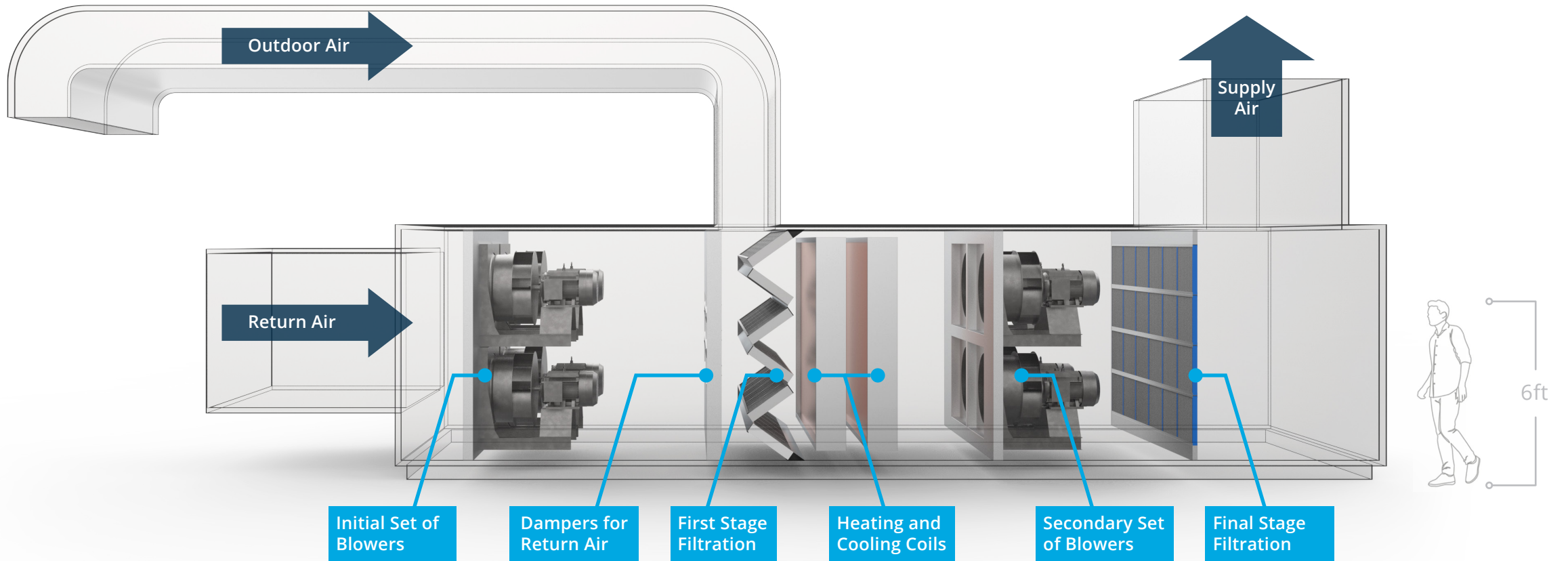
Novant Health offered GPS Air full access to their air handlers for an opportunity to collect real-world data. Over the course of two days, our team set up and ran a number of tests that ultimately led to compelling results around the efficacy of our Opti-Lok technology.

Understanding the System

Air Handler Specs: Trane, 28,000 CFM

Filtration: Two stages, MERV 10 (typically MERV 7) and MERV 15

Air Mix Ratio: Typically 80% return air, 20% outdoor air

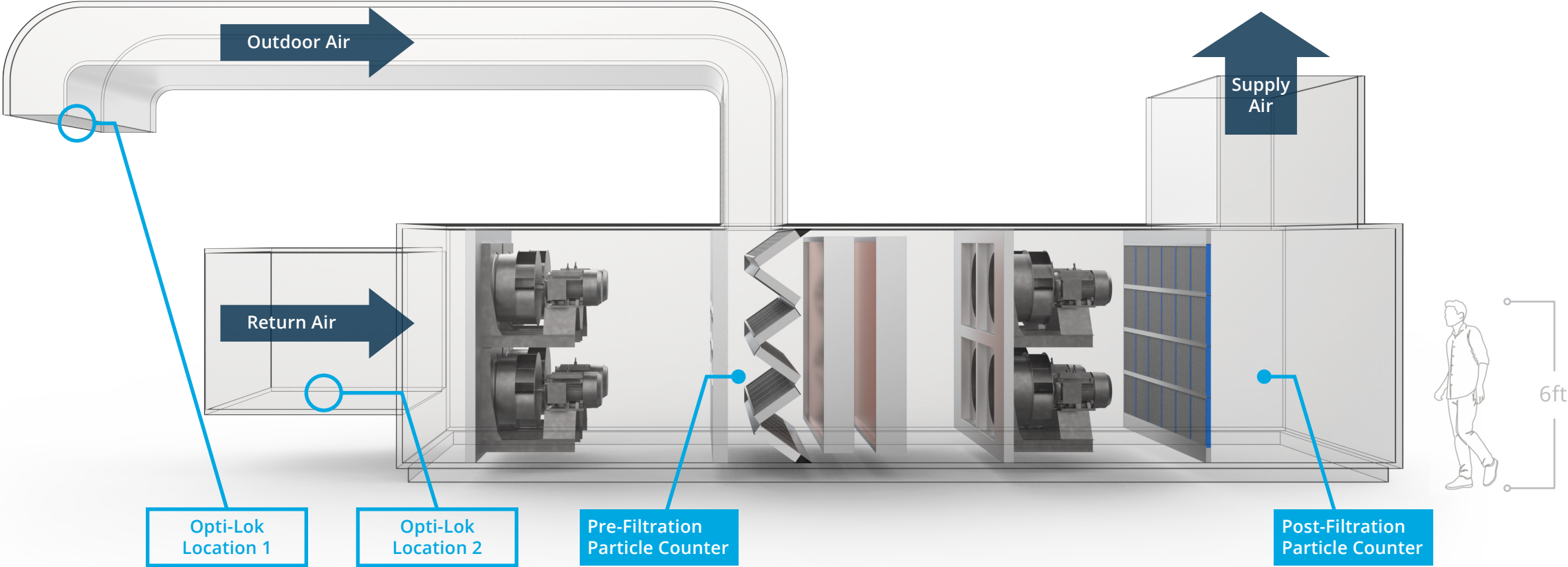


Test Configuration Overview

Particle Counters: TSI AeroTrak before first stage of filtration, TSI AeroTrak at end of system

Filtration: GPS Air tested (Opti-Lok compatible) MERV 8 and MERV 14 filters

Controls: Airflow, Air mixture ratio, Opti-Lok quantities and locations

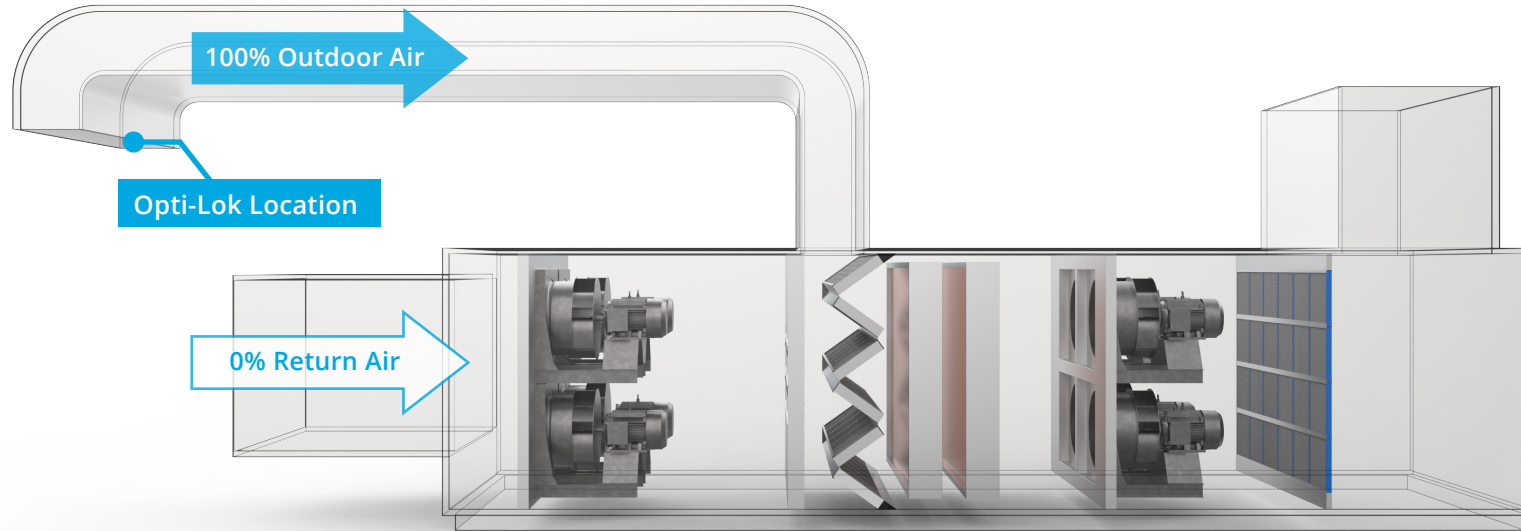




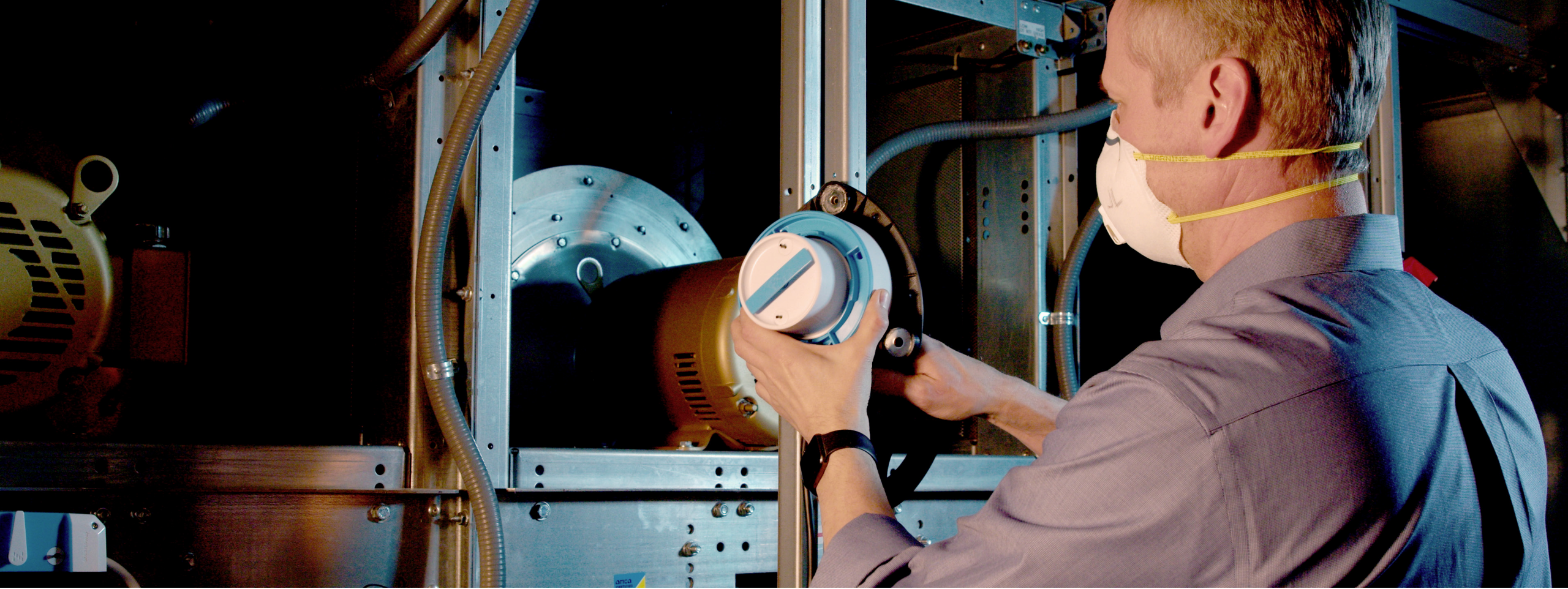
System Test 1

In this first test, the main variable applied was the number of Opti-Lok units powered on. The units were placed at the outdoor air intake, and the test was run using a ratio of 100% outdoor air and 0% return air. We installed a total of seven devices according to the system size, with one unit per 3,800 CFM per air source.

System Test 1



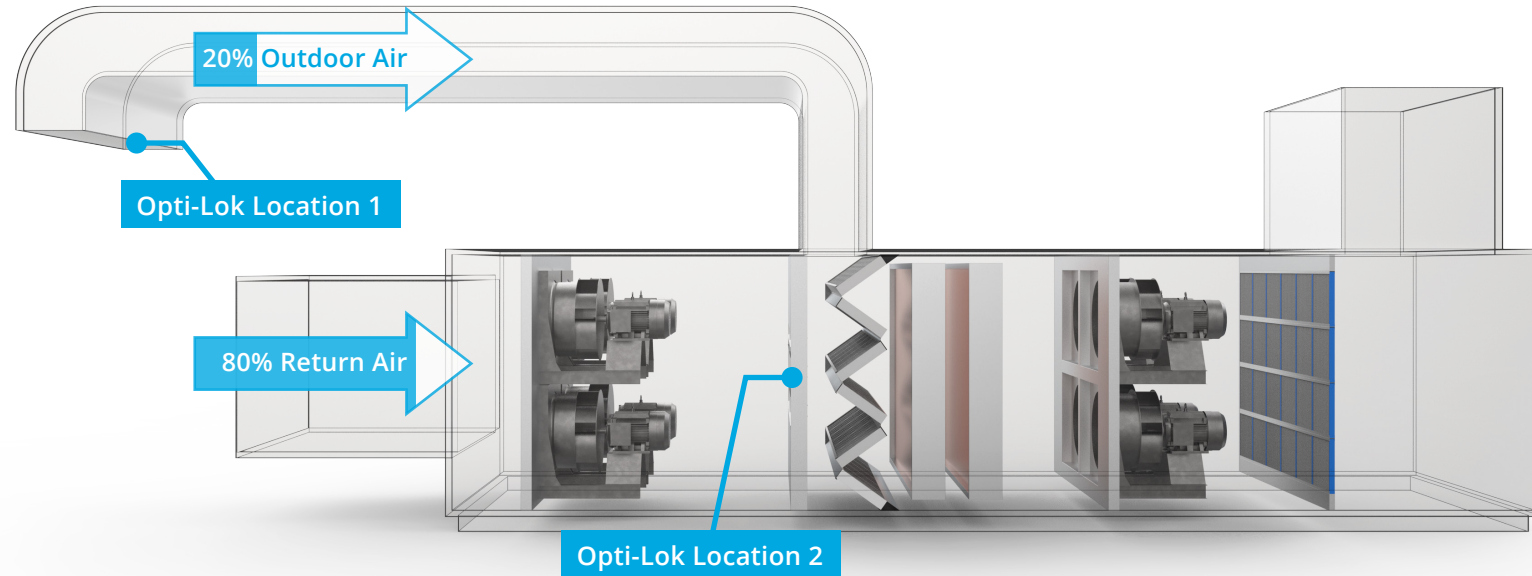
GPS Air Filter System Test 1 (100% Outdoor Air, Opti-Lok at Outdoor Air Intake)		
Bin Size	Baseline (% Removal)	Outdoor Filter Boosts (% Removal)
0.3 μm	81.7	96.4
0.5 μm	89.8	97.3



System Test 2

With this test, the air mixing ratio was set to 20% outdoor air and 80% return air. We installed a total of eight Opti-Lok devices according to the system size, with one unit per 3,800 CFM per air source. Two units were applied to outdoor air, and six units were applied to the return air. In this particular case, the team did not have access to apply the return air units in the most ideal location.

System Test 2



GPS Air Filter System Test 2 (20% Outdoor Air, 80% Return Air, Opti-Lok at Outdoor Air Intake and Return Air Chamber)		
Bin Size	Baseline (% Removal)	Return + Outdoor (% Removal)
0.3 μm	83.9	93.9
0.5 μm	90.6	96.4

Our partnership with **Novant Health** was a **success**. Our test results at their facility have significantly improved our understanding and our confidence in filter enhancement using **GPS Air's Opti-Lok technology**.



