GPS Air Soft Ionization Substantially Lowers Mold Counts in Dormitories.

GPS Needlepoint Bipolar Ionization (NPBI®) products are electronic air cleaners noted to neutralize certain airborne pathogens, boost filter performance, and reduce particles in the air. In this recent field evaluation, GPS NPBI technology is proven effective at **lowering mold particle spores in a dormitory to 1% of the count in outdoor air.**†

The Case Study

University, college, military, and recreational dormitories often have a combination of mechanically controlled windows for natural ventilation and distributed (PTAC) air conditioning. In this environment, particularly with wet or damp air conditioning coils, mold growth and mold spore circulation are a concern. A regional private college in the southeastern United States approached GPS Air to help mitigate the prevalence of mold spores and lower the potential health risks. The results are clear: a combination of well-maintained HVAC equipment and NPBI lowered airborne mold counts in the dormitories.

In August 2025, airborne mold samples were collected in one dorm room with ionization and an adjacent room without ionization. Following this test, the college added ionization to more dorm rooms. In September, airborne mold testing was performed again.

Mold Test Results

August	Dorm A (Ionization)	Dorm B (No ionization)	Outdoor
Spore Count/m3	387	9,557	13,014
vs outdoor count	*2.9%*	*73.4%*	

September	Dorm A (Ionization)	Dorm B (Ionization)	Outdoor
Spore Count/m3	1,394	1,520	132,028
vs outdoor count	1.1%	*1.2%*	

The Conclusion

GPS NPBI technology is proven effective at lowering mold particle spores in a dormitory to 1% of the count in outdoor air.

GPS CI-2 units were installed in the dormitory PTAC units for easy to apply, auto-cleaning ionization in the airflow. The ionizer is out of sight and easily powered by available low voltage. When the PTAC is operating, circulating the air, ionization is being delivered to the space. GPS IDF-2 units were installed in common spaces like lounges and entryways. The ion distribution fan provides ionization and airflow when it is powered - providing air cleaning even when the HVAC system is off.

Design guides and more case studies are at gpsair.com. CI-2 and IDF-2 have no replacement parts and no required maintenance.

†Mold samples were collected using air sampling tubes and analyzed by third party laboratories using optical microscopy. Mold counts in the dormitory were compared to outdoor conditions as the "control". Individual results may vary. For detailed test reports, email marketing @gpsair.com

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GPS Air Soft Ionization Substantially Lowers Mold in Hotel, Apartment & Condos

GPS Air's Needle Point Bipolar Ionization (NPBI®) products are electronic air cleaners noted to neutralize some pathogens, boost filter performance on small particles, and reduce the prevalence of mold spores in the air. In this recent field evaluation, GPS Air's NPBI technology was **proven effective at lowering mold spores in a hotel room by over 55%.**

The Case Study

Hotels, apartments, and condos have centralized air conditioning systems that are responsible for conditioning all of the air in the space, including outdoor air that is piped to support dilution and pressurization. Mold spores coming in from outdoors added to mold growth on wet air conditioning coils, and indoor sources leads to mold spore circulation in the air. A global resort/hotel operator in the southeastern United States, approached GPS to help mitigate mold spores (and odors) while lowering potential health risks. The results are clear: NPBI lowered airborne mold counts and maintained low spore counts.

Proven Effective - Mold Test Results

In March 2026, airborne mold samples in identical hotel rooms showed in room levels higher than outdoor levels. NPBI was installed in Room A. Room B remained unchanged as the control.

March	Room A	Room B (Control)	Outdoor
Spore Count/m^3	1,077	1,376	918

30 days later, with guests in the rooms, NPBI lowered spores 37%, and improved vs outdoor air.

April	Room A	Room B (Control)	Outdoor
Spore Count/m^3	673	1,162	897
vs March	*(37%)*	*(15%)*	*(2%)*

90 days later, mold spores continued to decline despite a spike in outdoor mold counts.

June	Room A	Room B (Control)	Outdoor
Spore Count/m^3	480	1,156	4,989
vs March	*(56%)*	*(16%)*	*443%*

†Mold samples were collected using air sampling tubes and analyzed by third party laboratories using optical microscopy. Individual results may vary.

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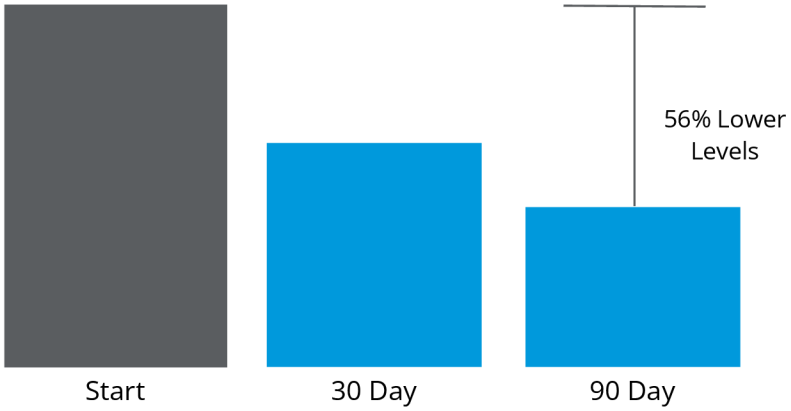
Results Summary



Solution Detail

GPS-FC-24-AC units were installed on the heat pump blower housing. Powered by the fan input, NPBI activates whenever the heat pump is running. Soft ionization is directed into the airflow for good distribution within the conditioned air. The NPBI device is silent, out of sight, and self-cleans for 10 years of operation without required maintenance.

GPS-FC24™-AC
Auto-Cleaning Soft Ionization System

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