

TAMPA BAY TIMES FORUM REDUCES CARBON FOOTPRINT & SAVES OVER \$115,000 ANNUALLY IN ENERGY BILLS

Location:
Tampa, FL

Year Constructed:
1996

Year Renovated:
2011

Square Footage: 670,000

Number of Decks/Levels:
3 / 7

Maximum Occupancy:
21,500

Facility Type:
Sports/Entertainment

Outside Air Reduction:
94,274 CFM

Cooling Load Reduction:
700 Tons

Air Handlers:
(12) 40,000 CFM AHU's

GPS Products Used:
(24) 144" GPS-IBAR's

Renovation Savings:
> \$1 million

Annual Energy Savings:
>\$115,500

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The Tampa Bay Times Forum was originally constructed in 1996. In 2011, Tappouni Mechanical Services was awarded the contract to renovate and upgrade the HVAC system. Working in conjunction with Smith Seckman Reid Engineers (SSR) out of Nashville, TN, Tappouni Mechanical Services utilized Global Plasma Solutions' (GPS) needlepoint cold plasma technology to control gases produced by the occupants and building such that a reduction in outside air could be achieved. Without GPS' technology cleaning the air in the building, 201,773 CFM of outside air would have been required to dilute contaminants produced by occupants and the building, but by using GPS' air purification technology to clean the air in the building, the outside air was reduced to 107,500 CFM for a total savings of 94,274 CFM. The outside air reduction was permitted by the American Society of Heating, Refrigeration and Air-Conditioning Engineer's Standard 62 IAQ Procedure as well as the International Mechanical Code. The reduction in outside air saved over 700 tons of cooling capacity. The cost of the avoided 700 tons of cooling capacity minus the cost of GPS' air purification equipment resulted in an overall savings greater than one million dollars! The annual energy savings by running 700 tons less cooling capacity will save the owner over \$115,000 annually. Since GPS' patent pending system requires no replacement parts and essentially no maintenance, none of the annual energy savings will have to be budgeted for future replacement parts, unlike GPS' competitor's systems.

In addition to the cost savings realized on this project, the IAQ will be exceptional. GPS' technology has been independently validated by EMSL Labs to kill pathogens in the space, unlike any other technology.

Pathogen	Time Exposed	Kill Rate
E. coli	15 minutes	99.68%
MRSA	30 minutes	96.24%
C. diff	30 minutes	86.87%
TB	60 minutes	69.01%



GPS

Saving Lives. Saving Energy™



ENVIRONMENTAL IMPACT:

1.25 Million Pounds of CO2 Reductions Annually
2,004 Pounds of Sulfur Dioxide Reductions Annually
1,039 Pounds of Nitrogen Oxides Reductions Annually
Pollution Savings Equivalent to Planting Over 3,000 Trees

GPS PROVIDES A BREATH OF FRESH AIR IN THE CLUB LEVEL CIGAR LOUNGE AT THE TAMPA BAY TIMES FORUM

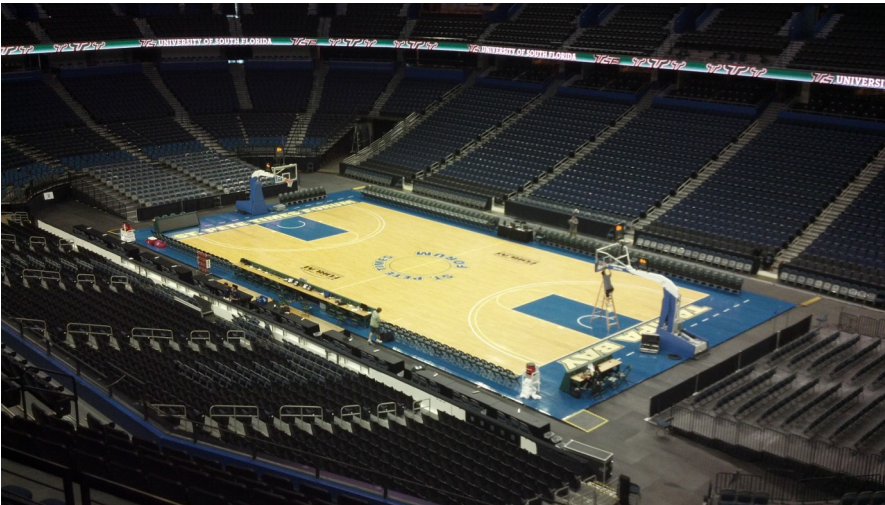
During the renovation of the HVAC system, the club level cigar lounge was also upgraded. To ensure proper smoke and odor control, six GPS-300 ceiling cassette units were provided. The cigar lounge has a hard wood ceiling so the fact the GPS-300 units are serviced from the space through the center return air grille allows for easy access to change the multiple stages of filtration. During an event, the cigar lounge may have over 30 occupants smoking cigars, which one cigar has the output equivalent to six cigarettes per hour. Smoke and odors are controlled effectively and no odors or smoke escape from the lounge.



One of Six GPS-300 Units Mounted In Ceiling



Premium Cigars for Purchase in Lounge



View of Arena Before Basketball Game from Club Lounge



Duct Mounted IAQ Sensor

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