

**Total Ceiling Solutions, LLC ("TCS")** is a leading solution provider and distributor of healthcare infection control solutions and energy efficient lighting solutions, helping professionals in health care facilities increase patient outcomes, and reduce clinical and administrative costs safely, effectively and with ease.

For years, TCS has helped owners, property managers and facility engineers of healthcare, commercial and industrial facilities substantially increase air quality and the quality of their visual environment through innovative HVAC, lighting, and now infection control systems.



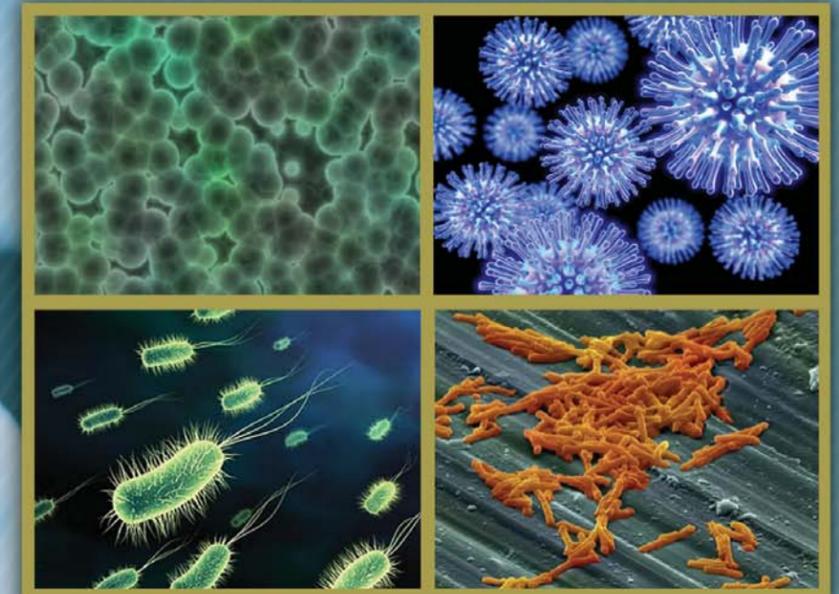
- Safely increase patient outcomes
- Reduce administrative and clinical costs with ease
- Systematically minimize operating expenses

**> Hospital Acquired Infection (HAI): 99,000 deaths per year in U.S. – 4th major cause of death**

**INFECTION CONTROL, MANAGING HEALTH RISK AND EFFICIENCY**

HAI has been a growing issue for the healthcare industry. The Centers for Disease Control estimates that there are over 1.7 million infections contracted annually with a \$42,000 average cost of treatment.

It is estimated that \$45 billion is added to the annual healthcare costs to treat HAIs, with an estimated 4.5 infections out of every 100 hospital admissions, extending average length of stay by 177%.



**Four Lines of Defense to Reduce HAI Risks and Improve Indoor Air Quality:**



**Filtration**  
Filter is deployed to eliminate hazardous agents at the source of exposure.



**Purification**  
Ultraviolet germicidal irradiation (UVGI) is deployed to expose pathogens to radiation for removal and destruction.



**Pressure**  
Using differential pressure, directional airflow is created to isolate contaminants in the area.



**Dilution**  
Adequate air changes per hour via ventilation, deploying room level purification to reduce HAI risks.

Using innovative standalone and integrated lighting with HVAC solutions, and employing the CDC's hierarchy of controls and prevention, TCS offers

(a) a suite of room-level Infection Control products to eliminate pathogens at the source, and

(b) a series of HVAC in-duct and on-coil airstream disinfection applications, and specialty HVAC Grilles, Registers and Diffusers, ideal for large air handling systems in commercial, industrial, healthcare and institutional settings.

Call our Product Specialists to discuss the right custom solutions to complete your projects affordably, effectively, and efficiently. TCS serves customers throughout the United States, the Caribbean, Latin America, Canada and Mexico. We look forward to discussing opportunities to create a win for you and a lasting relationship with us.



**BROCHURE**  
**2012**

TCS is a distributor for Arcalux Lighting with its Health Risk Management System, which eliminates pathogens at the source, safely, effectively, and economically.



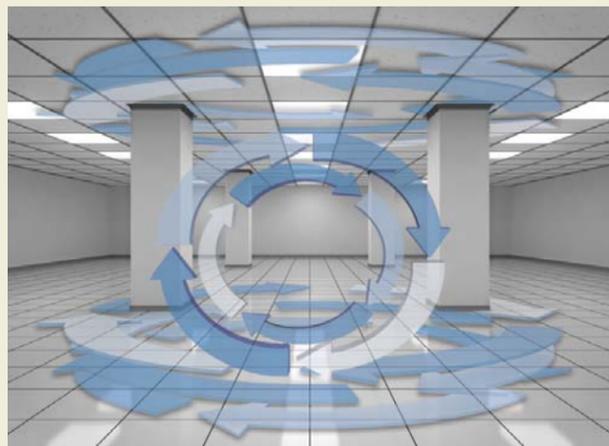
“ The Superior performance of the Arcalux Health Risk Management System enables high levels of air disinfection to be achieved as well as a consequent reduction in the risk of airborne nosocomial infection in any healthcare environment. ”

*Dr. Wladyslaw Kowalski*



With an average of 97% first-pass kill rate, Arcalux combines filtration, purification and dilution with differential pressure to simultaneously, quietly, and unobtrusively target and remove 99% of pathogens in the background at room level, 24 hours a day, with ease of maintenance.

With Arcalux® SmartFixture™ Lighting System as the delivery platform, the Health Risk Management System uses UVGI irradiation to achieve optimal zonal ventilation, re-circulating and purifying air at every corner of the room.



TCS distributes AirGuide Manufacturing's Critical Environment Product Lines and their Specialty Grilles, Registers and Diffusers to serve the healthcare and clean room marketplace.



Quality • On Time • On Budget  
**CRITICAL ENVIRONMENT**  
Infection Control with Clinical Cost Advantages

One of the major sources of microbiological particles in the operating room is from the surgical staff and is proportional to the number of people moving about in the room. The goal of any system is to isolate the patient from the microbiological particles in the operating room.



Specially designed to create a clean zone around the patient in the operating room with an air curtain, this system establishes an invisible barrier to the airborne microorganisms.



Protect and isolate your clean zone from contaminated room air and personnel that are outside the curtain. Tap into AirGuide's 50 years of trust in quality air distribution technology so that your critical environment projects can be on-time and on-budget with distinct clinical cost advantages.



TCS is a proud distributor of American Ultraviolet's Germicidal Solutions, serving the healthcare, commercial and residential settings with germicidal solutions that can be used in the air, in liquids and on surfaces to increase effectiveness and efficiency when removing pathogens at the source.



Deploying UVC technology, American Ultraviolet's germicidal fixtures reduce harmful pathogens, increase efficiency, prolong equipment life and improve indoor air quality by deactivating bacteria, viruses and mold across a wide temperature and air velocity range.



## TCS's Energy Efficiency Solutions

When buildings are designed, renovated, built and operated with the intention of minimizing environmental impact, everybody wins. Energy efficiency through the selection of sustainable products and solutions enables businesses to reduce operating costs, enhance comfort and worker productivity.

We help owners, property managers, and facility engineers of commercial and industrial facilities substantially increase the quality of light and visual environment while minimizing ongoing operating costs and environmental impact at the same time. TCS has access to more than 200 sustainable lighting product lines, including GE and Arcalux Lighting.

If you are concerned about your rising utility costs and are looking for ways to become more energy efficient, TCS can provide the expertise to assist in developing a lighting retrofit plan to meet your needs. Our trained lighting specialists can conduct a "Turn Key Solution" for energy efficient lighting deployments, to include:

1. Initial Lighting Assessment
2. Lighting Assessment Summary
3. Analysis of Key Areas
4. Financial Analysis
5. System Design
6. Financing Options



"From the energy savings it provides to the innovation in the fixture itself and the performance of the lighting system, there can be no doubt that the Arcalux SmartFixture is superior to any other products I have evaluated during my tenure as a facility director here at HealthSouth. We are very pleased with our lighting upgrade... and will continue to rely on them to in the future"

*Guillermo Manresa*  
Facilities Director  
HealthSouth Corporation

"With less than half the electric consumption, gaining almost 3 times the light, everyone is very happy with the renovations. I lowered our annual electric bill by \$50K even with a price increase and the project pays for itself within 19 months."



*John Hatfield*  
Director of Facilities  
West Gables Rehabilitation Hospital

