

JSA RETROFIT

HVAC Systems & Equipment

- **Energy Savings**
- **Reduced Repairs Costs**
- **Superior Comfort**
- **Quick Return on Investment**
- **Increased HVAC System Lifespan**
- **Control Expenditures**




JSA Service
Chiller & HVAC Specialists

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ABOUT

JSA RETROFITS

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- **Microguard1-3500**
 - **Elysator®**
 - **AHU- Refurbishments**
 - **SMC Software**
 - **EC Fan Grids**
 - **UV-C Retrofits / Install**
 - **Coil & air disinfection**
 - **HVAC Control Systems**

When possible, retrofitting commercial HVAC systems and equipment can be a cost-effective alternative to improve commercial HVAC without having to go through the entire replacement process. Most commercial heating and cooling systems have a functional service life of 15-30 years, depending on the brand and style of equipment – and whilst all equipment will eventually need a replacement, retrofitting provides a more cost-effective way to improve performance without having to replace the entire system.

Retrofit projects are designed to integrate new components into existing HVAC networks to improve system performance and lower energy consumption without the larger expense of total system replacement.

Your facility is a potential candidate for retrofit commercial HVAC improvements if:

- Existing commercial HVAC system is more than 10 years old
- Building occupants complain about indoor comfort
- Higher HVAC repair costs
- More HVAC downtime
- Increased energy bills
- Air quality issues

FEATURES & BENEFITS

Preserve, prolong and protect your assets

Retrofitting HVAC systems and equipment provides several benefits, here are the most important advantages associated with a well-planned HVAC retrofit strategy:



Energy Savings

Retrofitting HVAC equipment is one of the quickest ways to solve chronic problems with high energy consumption. On average energy consumption can be reduced by 40% when retrofitting HVAC systems and equipment.



Increased HVAC Lifespan

Replacing a worn or defective part gives your HVAC equipment new life. In fact, sometimes you can even extend the life of your system by several years, spending far less money than a whole system replacement.



Improved Comfort

A retrofitted HVAC system will operate with more consistency than an older or poorly maintained system. This consistency leads to more control over temperature in humidity, resulting in improved comfort for occupants.



Reduced Repairs Costs

HVAC repairs are expensive, but the hidden costs are far more devastating. Unexpected downtime can affect sales, revenues, customer satisfaction and employee productivity.



Quick ROI

Retrofitting equipment is much cheaper than investing in a whole commercial HVAC system replacement. Given the energy and service savings of retrofitted equipment, ROI is achieved quicker than a full replacement.



Control Expenditures

An unanticipated HVAC equipment breakdown can play havoc with departmental budgets. By planning heating and cooling upgrades and maintenance, costs become controlled and predictable, which can save money and help relieve stress.



Flexibility

Commercial spaces are constantly changing: interiors are rearranged, occupants move in and out, and infrastructure requirements change. Retrofitting HVAC systems allows you to continue adapting to the needs of occupants without huge investments.



New Technology

Not only do retrofitted systems operate more consistently, they operate more efficiently and independently. This adds to energy savings, as mentioned, but it also decreases the costs of maintenance and service because the new part will be more dependable.

**INTERRUPT THE
EXPENSIVE REPLACEMENT
CYCLE OF YOUR HVAC
EQUIPMENT WHEN USING
MG1-3500 ON GOOD
CONDITION COILS!**



Side by side comparison using MicroGuard1-3500

MICROGUARD1

Protect heat exchangers & metal surfaces

Introducing Adsil's next generation HVAC/R coating - MicroGuard1-3500. MG1-3500 is among the most advanced protective coating available to protect your HVAC equipment. Proven to positively arrest corrosion, protect against chemical and environmental assault, extend the life of equipment, save energy and mitigate microbial growth providing sustainable results with a verifiable ROI. For best results MG1-3500 is most effective when coils are treated whilst still in good condition and pre-erosion/corrosion/wear and degradation.



PRESERVE

MicroGuard1-3500 is an inorganic cross link cured, glass-like film that chemically bonds to non-ferrous metal ensuring maximum adhesion and protection in the harshest environments. At 6-8 microns thick, the coating preserves your new HVAC/R system's performance without affecting heat transfer or laminar air flow.

PROLONG

MG1-3500 can prolong your HVAC/R system beyond its normal engineered life expectancy when applied to coils in good condition, extending the replacement cycle and capital budget outlay. Deferred capital expenses and provided energy savings drop directly to the bottom line.

PROTECT

MG1-3500 offers superior corrosion protection, but it doesn't stop there! MG1-3500's advanced formula protects against pollution and chemical assault other coatings can't, cannot oxidize, will not support mold growth improving indoor air quality. Its hydrophobic properties repel debris, reduce maintenance and save energy protecting your assets and your bottom line.

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ELYSATOR

Chemical-free water treatment

Oxygen diffusing into the water of recirculation heating and cooling systems leads to corrosion. A low pH and increased electrical conductivity of the system water also promote corrosion. The accumulation of sludge and corrosion products in heating and cooling systems can cause severe hydraulic problems.

The ELYSATOR® is market leader in corrosion protection of recirculation water systems by using a sacrificial

anode to extract oxygen, acid and aggressive salts from the water. It is equally suitable for protecting new systems and for retrofit in existing plants.

The electro-chemical reaction of the sacrificial anode is reliable, measurable and works without chemical additives. This successful method has had positive results for over 40 years and installation and service are easy and at low cost.

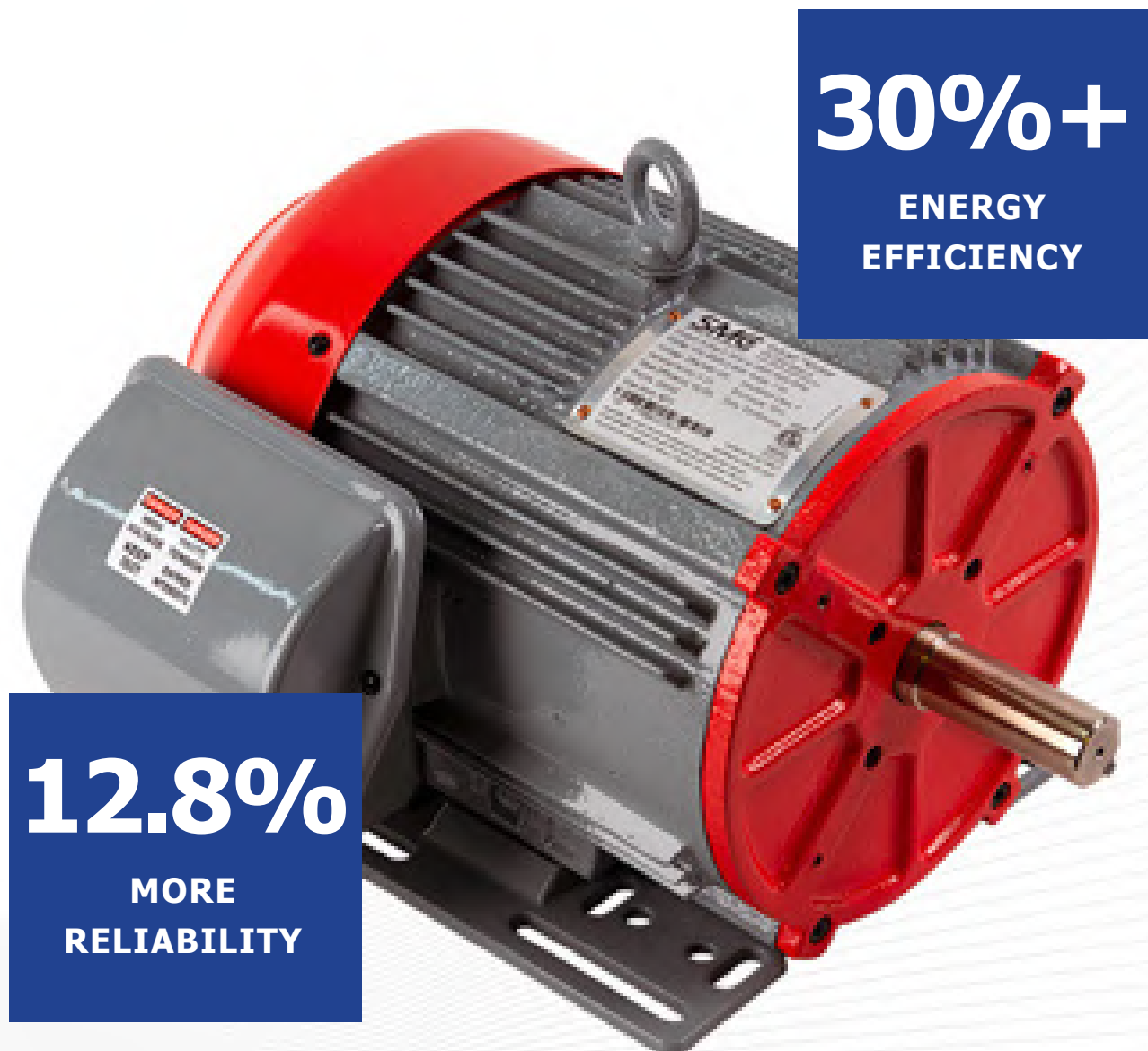
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- **NO CHEMICALS**
 - **MINIMUM MAINTENANCE**
 - **SELF REGULATING**
 - **KILLS AND PREVENTS GROWTH OF BACTERIA**
 - **FAST "PAY BACK"**
 - **IMPROVED WATER QUALITY**
 - **ENVIRONMENTALLY SAFE**
 - **MEETS ISO 1400 REQUIREMENTS**

AHU - REFURBISHMENTS

SMC Software

SMC electric motor is the most efficient, reliable and innovative electric motor for HVAC systems on the market today. Using a patented Smart Switched Reluctance motor design, the SMC motor has combined a bespoke, intelligent IoT-driven software controller and driver to produce a solution that delivers a supremely controllable motor, at a much reduced lifetime cost when compared to alternative motors.

The motor's built-in software and connectivity provides constant real-time monitoring of energy use, speed, torque, and temperature which allows automatic diagnosis of HVAC system issues. This connectivity also means remote controllability, maximising energy efficiency as well as enabling demand-side management to avoid higher energy tariffs and enjoy demand side response revenues.



AHU - REFURBISHMENTS

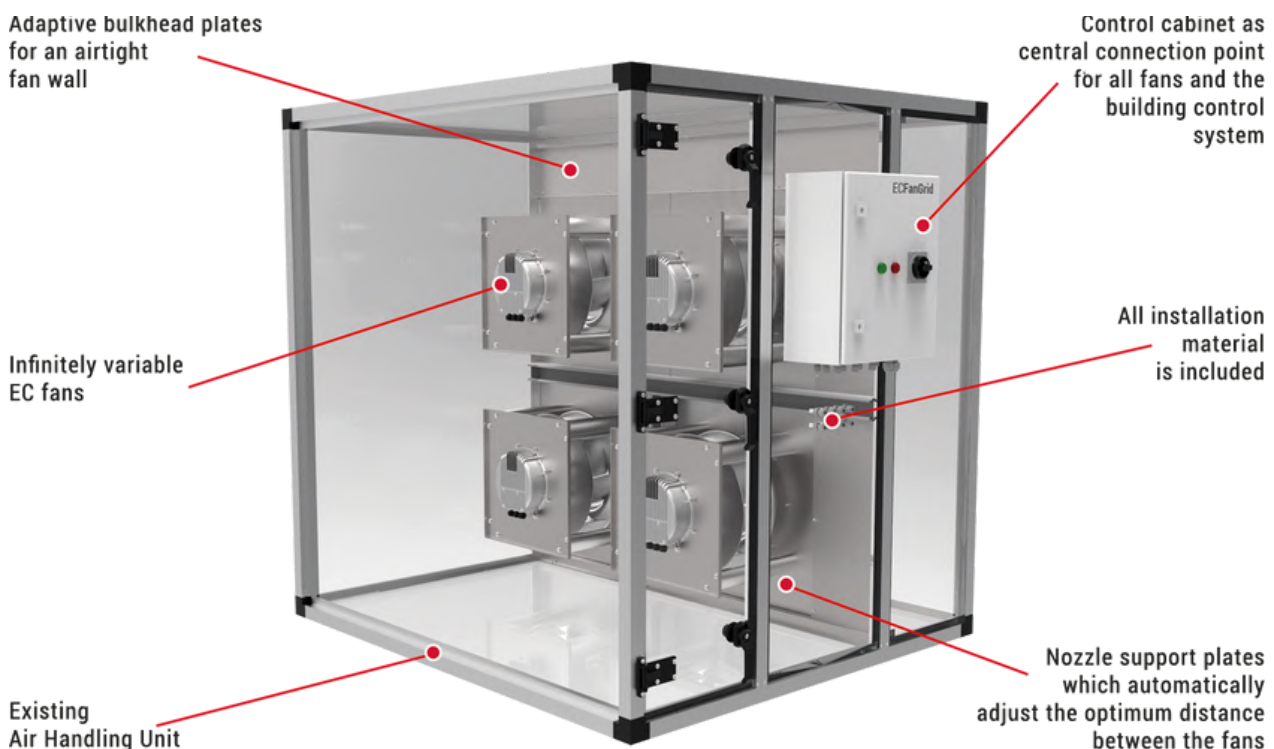
EC Fan Grid walls

An EC Fan Grid consists of several EC fans operating in parallel. The volume flow is multiplied proportionally to the number of fans, while the pressure conditions remain constant. The EC fans used are not only highly efficient, but as a perfectly matched unit (electronics, motor & impeller) they also enable simple plug & play solutions for almost any ventilation requirement.

In addition, several controllable fans can be adapted much better to the actual air performance required, which increases efficiency at every operating point. The EC Fan Grid Retrofit System is particularly suitable for replacing old, inefficient belt-driven fans in ventilation units.

Five benefits of switching to EC fan grid walls:

- Up to 70% potential energy saving.
- Variable speed control matched to load requirement.
- Direct drive motors for maintenance free operation.
- Reduction in noise levels – no acoustic enclosures required.
- Easy connection – low set up costs.



UV-C RETROFITS / INSTALL

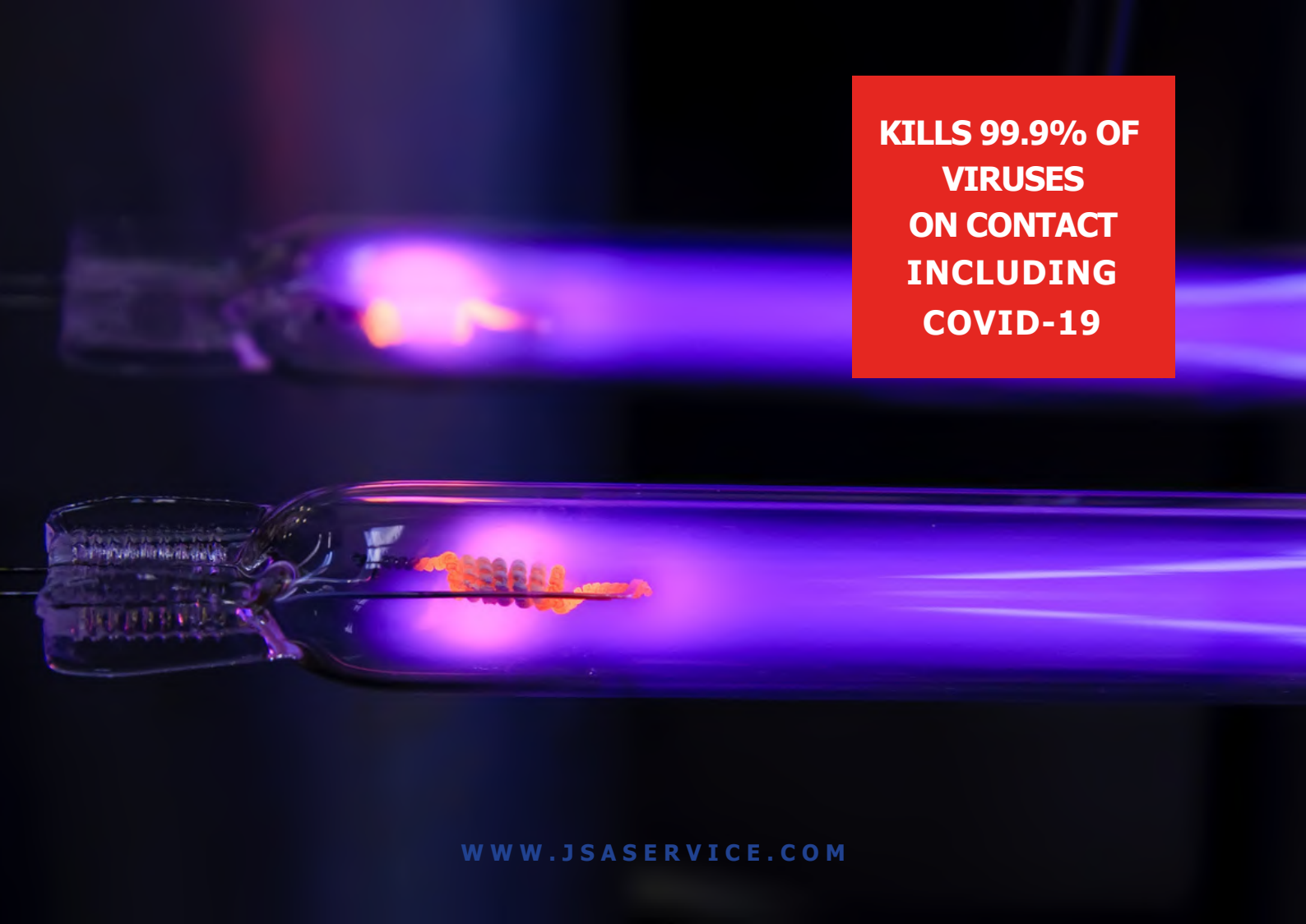
Coil and air disinfection

A key component in HVAC system upgrades is the addition of ultraviolet-C (UV-C) lamps. Used extensively to improve indoor air quality and heat exchange efficiency, boost airflow and reduce maintenance, the UV-C wavelength eliminates, and further prevents, microbial and organic materials buildup on HVAC cooling coils, air filters, duct surfaces and drain pans.

However, it is the technology's ability to potentially slash between 10 to 25 percent of HVAC energy use that drives the majority of installations.

Multiple benefits of Installing UV-C technology in your building's HVAC system:

- Improved control and maintenance of building temperature
- Reduced running costs
- Lower CO2 emissions
- Improved air system hygiene
- Reduced corrosion leading to extended cooling coil life
- Decreased maintenance of chilled water pumps and chillers
- Running less chillers for cooling load
- Lower chilled water flow rates
- WELL Building Standard® compliance



**KILLS 99.9% OF
VIRUSES
ON CONTACT
INCLUDING
COVID-19**

HVAC CONTROL SYSTEMS

Smart Technology

CLIMACHECK

A cleantech company with a unique method for analysis of cooling and heating processes, with the objective of optimising the functionality and daily operations of heat pumps, refrigeration and air conditioning systems. ClimaCheck's proven solutions increase energy efficiency and can lead to energy savings of 10-30% – whilst also contributing to increased plant reliability, reduced equipment wear and lower operating expenses.

OPTIMISED BUILDINGS

Optimised Buildings use artificial intelligence to make your building energy efficient and can deliver a ROI in less than 1 year. Combining several cloud-based technology platforms with advanced tracking tools, Optimised Buildings can ensure that your building is monitored and managed in a cost-effective way. By turning data into information they can identify HVAC/R control issues, monitor energy and improve performance without compromising occupant comfort.

ENVIROLOGIK

Smart HVAC/R IOT Condition Based Monitoring to prevent unnecessary scheduled maintenance visits and HVAC/R equipment failures. Envirologik can save you time and money by adding sensors to your equipment to monitor temperature, energy consumption, water leaks, refrigerant pressures / leaks etc. Issues can be diagnosed remotely, reducing often expensive callout charges.

CAREL

CAREL proposes a range of products that are simple to install, guaranteeing the maximum in terms of flexibility, operability and reliability. The retrofit of existing systems is closely related to the need to comply with HACCP regulations (hazard analysis and critical control points), which requires all businesses operating in the food industry to implement self-control procedures aimed at preventing the hazards relating to the safety and the conservation of foodstuffs for human consumption. CAREL, through the combined offering of products such as the IOM modules, Synchro wireless and PlantVisorPRO, ensures the certainty of continuous and detailed monitoring of the systems.



We are registered and comply with the requirements of



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