



ENERGY SYSTEMS LLC



MIDDLE EAST

LEADER IN SUSTAINABLE TECHNOLOGIES
HVAC LIGHTING ENERGY SOLUTIONS

Overview

Gerab Energy Systems LLC a subsidiary of the Gerab Group of Companies has been formed by professionals from the Energy and Control fields (industry) who have come together to share their experience and expertise and bring energy efficient and energy saving products and solutions to our region.

Gerab Energy's solutions include electromechanical, energy efficient & energy saving systems and sophisticated intelligent electronic systems specially used in energy sub-metering, monitoring and control. The energy systems we offer, helps audit existing load, reduce energy consumption, improve power factor, and prolong the lifespan of equipment like motors, compressors lighting etc. Our solutions are developed for various industries and can be beneficial especially to the mid & heavy industries, Hospitality industry, Commercial buildings, Cold value supply chain operations, Hospitals, Multi-story Car parks and Residential buildings.

Our products meter energy consumption and our solutions provide subsequent cost savings to follow. This will help investors utilize the minimum energy required resulting in a maximum return on their investments.

Gerab Group

Gerab Group is a 45-year-old group with its main office located in Jebel Ali. Gerab started its humble beginning in 1977 and today has its operation throughout GCC along with USA, India, and Far East. Gerab Group has diverse businesses in the areas of Oil and Gas, Real Estate, IT, Facilities Management etc. and employs 350 staff across the GCC, India and the USA.

GERAB Group Subsidiaries

Gerab National Enterprises, Gerab Energy Systems, Gerab System Technology, Gerab System Solutions, Al Arsh Facilities Management, Al Arsh Properties LLC.



SPECIAL FEATURES

- ✓ The water spray is triggered by an ambient sensor or refrigerant head pressure to ensure minimum water is used, and maximum benefits are gained.
- ✓ The water on the wet pads provides an adiabatic cooling effect on the incoming air, thus reducing the temp before it reaches the heat rejection coil (Condenser Coil).
- ✓ Air cooling reduces the head pressure and discharge temp.
- ✓ Water supply duration and frequency increases to match the ambient temp.
- ✓ Once the low ambient set point is reached the water supply is automatically terminated.

ADVANTAGES

- ✓ Less Water consumption
- ✓ No water falling on chiller equipment
- ✓ Energy saving / Green product
- ✓ Zero Maintenance
- ✓ Condenser total protection from dust
- ✓ Less condenser maintenance
- ✓ Energy Savings up to 20 %.



Evaporative cooling

ADIABATIC PRE-COOLING

Adiabatic pre-cooling panels *HIGHER cooling efficiency, with lower energy consumption.



SPECIAL FEATURES

- ✓ Energy saving
- ✓ Increasing cooling capacity
- ✓ Protection of condensers and coolers

We combine adiabatic, evaporative pre-cooling and standard cooling technology.

ADIABATIC PRE-COOLING is a tailor-made design for your cooling equipment. Precise calculations ensure efficient work conditions by reducing incoming air temperature on condenser coils.

"ADIABATIC PRE-COOLING"

- ✓ Protective evaporative membrane keeps cooler, clean and protecting condenser coil from pollution in the air
- ✓ Protect condenser from corrosion
- ✓ Water treatment eliminating calcium deposit risk
- ✓ High pressure pump and nozzle panels ensures 20-micron droplet size. As result faster evaporation and efficient usage of water
- ✓ UV lamp protects from legionella bacteria
- ✓ Operation panel analyse ambient relative humidity, temperature and supply optimum quantity of water which could be evaporated.



ACES
AIR CONDITIONING ENERGY SAVER

For Split, Window & Package Air Conditions



- It is a retrofit product that adds intelligence to air-conditioning systems, which saves kWh and extends compressor life.
- Sensor driven software algorithms designed to detect thermodynamic saturation and optimize compressor run times
- Provides anti-short cycling; mandatory compressor off time after thermostat reaches set point (3 minutes) or loss of power (1 minute).
- Reduces equipment operating temperature and prevents evaporator freeze-over by properly cycling the compressor. Constantly adapting its settings to inside demand requirements and outside weather conditions.

ETAP develops & produces its own luminaires and systems, for both general & emergency lighting in Belgium.

We support our customers from A-Z with a comprehensive set of services including Light control for buildings.



EXCELLUM

A unique addressable light control system that was designed based on four key objectives:

- Huge energy savings
- Optimal lighting quality and ergonomics at work
- Simple design, installation and use
- Short pay back time

ROBUS®

The
**MAGNIFICENT
SEVEN**

As a market leading brand, the ROBUS range of lighting solutions are proven and trusted by over 2,000 stockists and thousands of installers internationally.



Vialuce

is a collection of outdoor equipment and luminaires for private or public areas. It meets lighting needs that are currently unfulfilled by standard equipment : • Pedestrian or cycling paths; • Parks, public areas, garden or parking where access to the electrical grid is difficult or expensive; • Sports fields or road far from a power grid; • Any other areas with difficult access to the power grid.



LIGHTING



Making the right choice is key to the success of any lighting design no matter how large or small. Specialising in LED, Collingwood Lighting offers you an exciting range of innovative products to help you make the right choice every time.



LIGHTING

You can't manage what you can't measure... BEST has the solution

Up to 43% of global energy consumption is going to waste as a result of inefficient equipment and business practices. Without a reliable and accurate way to measure ongoing consumption organisations have little chance of preventing that waste.



ENERGY SOLUTIONS

IMEC

INTELLIGENT MOTOR ENERGY CONTROLLER

The world needs more efficient motors... BEST has the solution

Electric motors and the systems they drive are the single largest consumer of electricity worldwide, accounting for more than 40% of global electricity consumption. Motors are widely used in both commercial and industrial manufacturing processes, where they can account for up to 54% of total electricity use.



SMART STEAM TRAP™

Steam is one of the most expensive utilities for the manufacturing plants in the US. Effective maintenance on a steam system is necessary to ensure high product quality and longevity of the steam reticulation system. One specific area that requires ongoing maintenance are steam traps. Leaking steam traps waste energy, affect product quality, waste water, and adversely affect the environment through greenhouse gas emissions when more boiler fuel is used.

SMART steam traps will permanently stop inefficiencies and will operate properly even in varying load conditions. Unlike conventional steam traps, SMART steam traps have no moving parts which can wear out and fail.

All SMART series steam traps are built from stainless steel and come with a 20-year mechanical and performance guarantee to ensure the trap will work properly, providing benefits to manufacturing plants for an extended period of time. Steam traps have been found to reduce energy bills by up to 20%, reduce chemical treatment, and CO emissions dramatically.



SOLAR - Panel & Street Lighting

Solar energy is the cleanest and most abundant renewable energy source available. **Gerab Energy Systems** provides a range of products and technologies that can harness this energy for a variety of uses, including generating electricity, providing light or a comfortable interior environment, and for commercial or industrial uses.

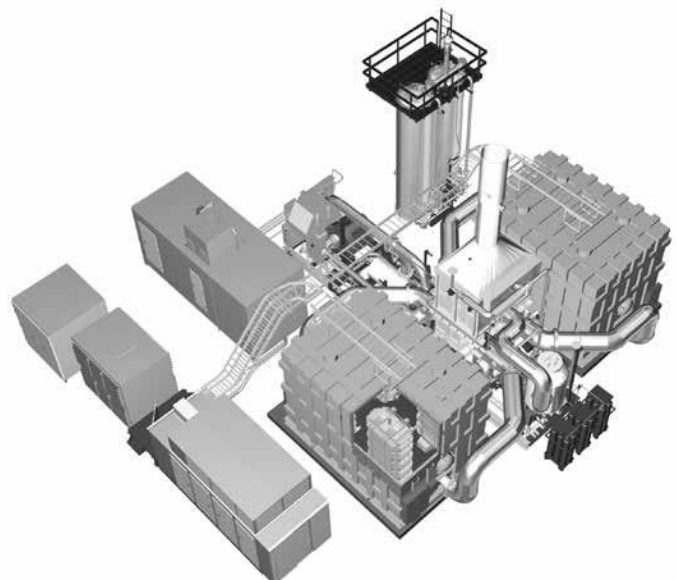


FuelCell Energy

Ultra-Clean, Efficient, Reliable Power

Solving power generation challenges with economical and environmentally friendly stationary fuel cell power plants

Direct FuelCell® power plants are generating ultra-clean, efficient, and reliable power on three continents, affordably providing continuous distributed power generation to a variety of industries including utilities, commercial and municipal customers. The Company's power plants have generated billions of kilowatt hours of ultra-clean power using a wide variety of fuels including renewable biogas from wastewater treatment and food processing, as well as clean natural gas.



Typical FuelCell Energy Power Plant



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