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Overcoming Challenges in the HVAC Industry with Rubber World Industries

Danfoss

Levent Taşkın
President of MENAT Region

HVAC Innovations Through The Years

Latest HVACR Technologies

- Adiabatic Air Inlet Cooling Options For Dry Heat Rejection Equipment
- Boss, The New Mobile-Ready Local Supervisor
- Clivet Enhanced Hydronic System, The New Frontier of Central Plants

Special Features

- How to Prevent Viral & Bacteria Outbreaks On Board
- Start Breathing Fresh Air Today
- Fighting Climate Change & Ozone Depletion with Kingspan Insulation
- Thinking Cool To Create Future Standards

Assessing An Engineer

- What Every Engineer Can Learn From Tradesmen, Foremen and Workers
- Why You Should Never Be An Arrogant Engineer
- Are You Too Smart For Your Job?
- How Can You Sharpen Your Mind

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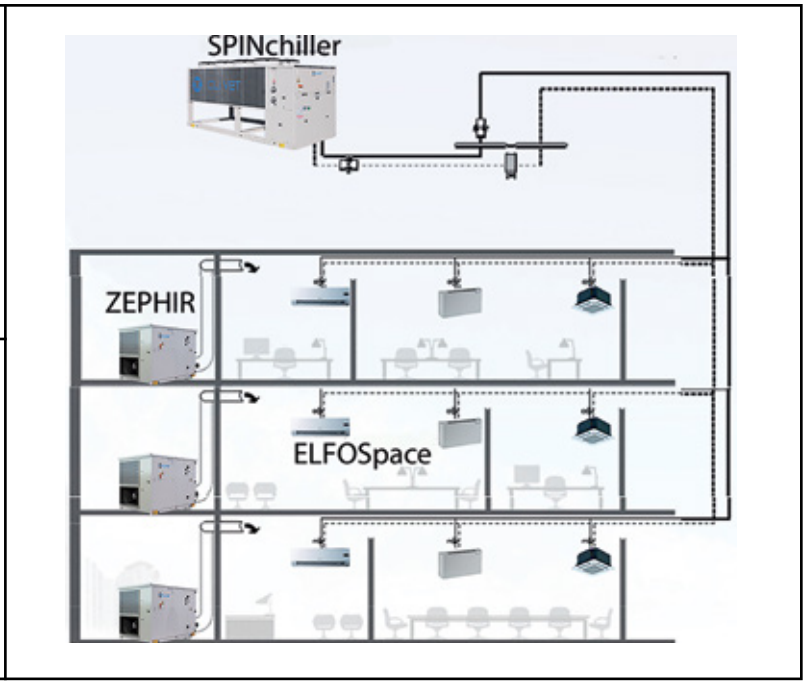
Clivet Enhanced Hydronic System, The New Frontier Of Central Plants



Buildings need a great amount of energy to be properly operated and keep suitable comfort conditions to occupants. This behaviour becomes dramatic in regions with desert climate, such as Gulf Countries, where energy consumption for domestic and commercial buildings is up to 70% of the energy used and the most part of this is spent for air conditioning.

In order to grant optimal comfort conditions with a sustainable amount of energy, Clivet has developed the Enhanced Hydronic System. Based on high efficiency technology and reversible heat pump, it is a specialized and efficient answer to comfort requirements of shopping centres, offices, hotels, restaurants, entertainment, hospitals.

CLIVET Enhanced Hydronic System is composed by 3 basic components:

- ZEPHIR3 stand-alone system for supply and exhaust air management with thermodynamic energy recovery, full fresh air operation, total humidity and automatic temperature control, electronic filtration able to keep 99% pure air
- SPINchiller3 air cooled or water cooled multi scroll chiller and heat pump for heating, cooling and hot water production
- ELFOspace cased and uncased fan coils with DC brushless motors for heating and cooling distribution with a saving of 60% compared to traditional fan coils

The dynamic year-round analysis on a multi-level office building in the city of Dubai resulted in:

- reduced energy consumption thanks to the autonomy (for most operating time) of ZEPHIR3 system for Primary Air treatment to produce heat and cooling capacity with thermodynamic recovery
- low power input for ventilation using the thermodynamic recovery: reduction up to 50% compared to the traditional solution
- high part-load efficiency of heat pump technology using SPINchiller3 modular multi scroll
- lower energy cost in year-round operation, with overall capital cost lower than traditional solution in most projects
- 20% reduction of plant overall dimensions