



## Company Presentation



# Clivet

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Clivet is a European leading company that designs, produces and distributes systems for cooling, heating, air ventilation & purification with a wide range of solutions for residential, commercial and industrial applications.

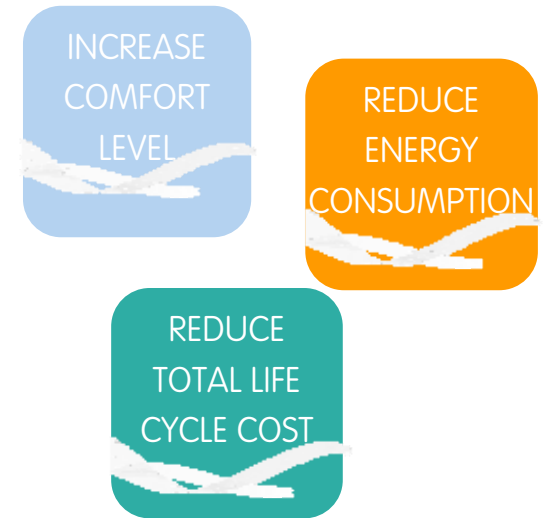


# Comfort and energy saving

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Our mission is to improve total comfort and indoor air quality, developing advanced systems based on renewable sources, the ability to reduce energy consumption, minimize environmental impact and reduce Total Life Cycle Cost.

- Units with low energy consumption
- Use of "clean" energy
- Use of ecological refrigerants
- No direct CO<sub>2</sub> emissions in the ambient



# TECHNOLOGIC EVOLUTION

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- 1989 Clivet is established. Introduction of compact high efficiency chillers equipped with plate exchangers
- 1990 Innovative large application of Scroll compressors
- 1992 Start up of Roof top units
- 1994 Development of high capacity chillers with semihermetic compressors
- 1996 ELFO hydronic terminal units with variable speed DC fans
- 1997 System and application department develops specific solutions based on user needs  
Decentralized system WLHP (Water Loop Heat Pump) by energy transfer
- 1998 Specialized patented high attendance CSNX roof top units, with active thermodynamic recovery and DC fans for Multiplex Cinemas and theatres  
Large capacity chillers and heat pumps for large commercial surfaces



# TECHNOLOGIC EVOLUTION

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- 2001 ELFOEnergy: a milestone in the development of low-mid capacity chillers & heat pumps with high efficiency at partial loads thanks to the introduction of two compressors of different size
- 2002 SPINchiller series: a milestone in the development of large capacity chillers & heat pumps with high efficiency at partial loads, thanks to the use of 3 compressors
- 2004 ELFOFresh and Zephir, the innovative fresh air series for all applications with active thermodynamic recovery and electronic high efficiency air filters  
ELFOSystem Home , the residential comfort system
- 2005 Strong development of heat pumps in every application field
- 2008** ELFOEnergy GAIA: the first residential integrated system, that provides heating, cooling and domestic hot water, with possibility of direct connection to solar panels



# THE GROUP

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## Organization:

- Italy
  - Headquarter
  - 2 production units: 33.000 + 9.000 m<sup>2</sup>
- World
  - 8 branches: France, Spain, United Kingdom, Germany, The Netherlands, Russia, UAE, India
  - 1 production unit: India

## Main 2008 figures:

- Turnover: 120 Million
- Employees: 860 (560 in Italy)



# DISTRIBUTION

## IN ITALY

- Sales representatives 36
- After sales service partners 100



## IN THE WORLD

- Commercial partners 30  
*in Europe – Middle East- Africa - Asia*



- Headquarter
- Branches
- Distributors

# THREE BUSINESS APPLICATIONS

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Clivet air-conditioning systems have been studied specifically for all applications to find the best answer to the different requirements in order to achieve a comfortable ambient in the residential, commercial and industrial sectors. They are based on a wide and complete range of products from 1,5 kW to 1.800 kW made to precise quality standards.

Residential



Commercial

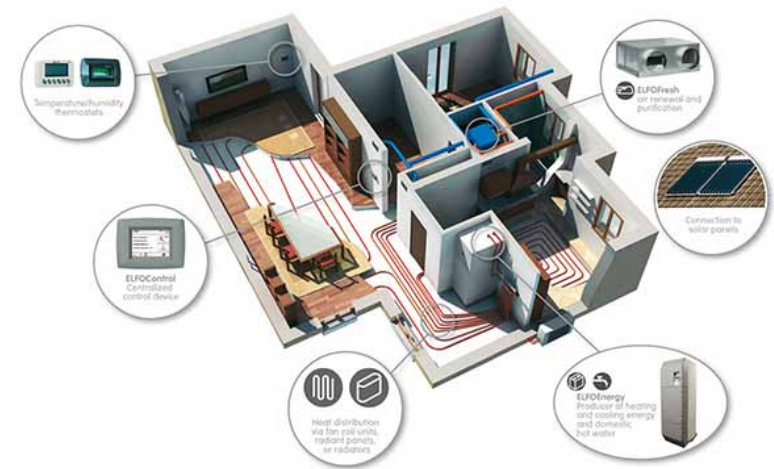


Industrial



# THE RESIDENTIAL SYSTEM

ELFOSystem HOME has been created for residential applications with high efficiency heat pumps. This system has been designed to integrate renewable energy sources like solar panels, in order to achieve a total independence from the traditional fossil sources like natural gas, oil and lpg.



## ELFOSystem HOME - Components of the system



# THE COMMERCIAL AND INDUSTRIAL SYSTEMS

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## PACKAGED System



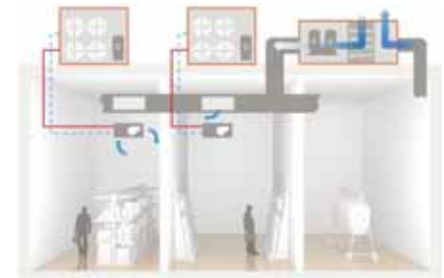
## HYDRONIC System



## WATER LOOP System



## SPLIT System



Clivet offers a solution based on four different integrated air-conditioning systems, according to the commercial and industrial needs: Packaged, Hydronic, WLHP (Water Loop Heat Pump)/WSHP (Water Source Heat Pump), Split Solutions.

# PACKAGED System

As to the ROOF TOP solutions, Clivet has been able to reach the leadership on the national market, reaching in few years a 50% market share.

AIR SOURCE ROOFTOPS, LARGE CAPACITY



WATER SOURCE ROOFTOPS



AIR SOURCE ROOFTOPS, SMALL CAPACITY



# HYDRONIC System

It represents the historical business area for the company. Clivet has produced high level solutions such as the innovative **SPINchiller** and all the heat pump series have been optimized for high efficiency heating.

## CHILLERS AND HEAT PUMPS



## FRESH AIR MANAGEMENT



## TERMINAL UNITS



# WATER LOOP System

Using the water loop technology, these units offers the possibility to work at the same time both in cooling and in heating, reaching excellent operation efficiencies.

## HEAT PUMPS



## FRESH AIR MANAGEMENT



## SYSTEM MANAGEMENT



# SPLIT System

Direct expansion Split systems and Close Controls units are included in this area of business in order to offer a simple solution to many light commercial applications.

## MID CAPACITY SYSTEMS – INDOOR INST.



## MID CAPACITY SYSTEMS – OUTDOOR INST.



## SMALL SYSTEMS

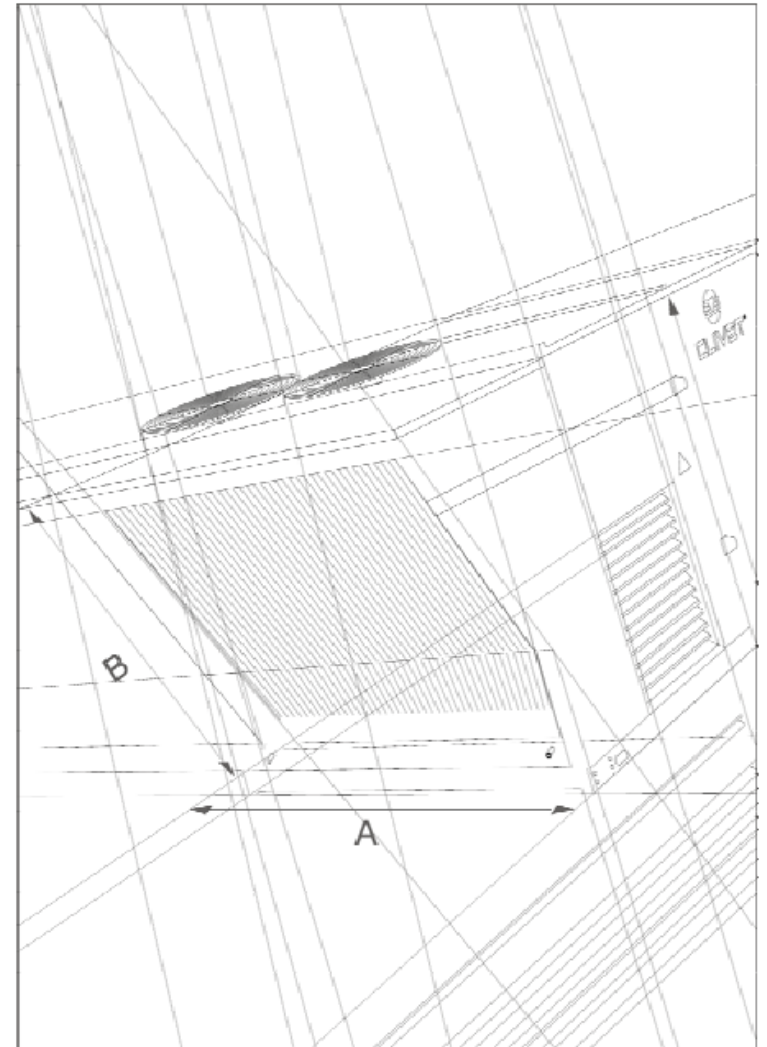


# WE PRODUCE COMFORT

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We design and produce innovative integrated air-conditioning systems, easy to install and maintain, able to manage all the features that generate comfort. All systems are provide with management systems and highly specialized maintenance programs.

Every year we allocate substantial resources – more than 3% of turnover – to innovation, research and development.



# INDUSTRIAL ASSET

## LEAN PRODUCTION

- Mechanical and electronic production of components
  - Highly verticalized production
  - Use of the latest generation folding, pressing and cutting machinery
  - Proprietary software
  
- Efficient use of facilities
  - Less warehouse stock
  - Reduction of production mistakes
  - Supply rationalization



# PRODUCTION FACILITIES

## UNIT TESTS

- 100% individual product test
  - Computer-assisted procedures
  - Full operation checks
- Automated heat pumps production tests
- 3 new performance test laboratories (up to 150 kW)
- 2 new laboratories with Eurovent precision standards by the end of 2009 (up to 2.200 kW)
- Automated warehouse : 1.500 cells (2m x 1 m x 2m), 2 picking carts



# TOTAL QUALITY CERTIFICATION

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The highest level on:

- Safety
  - 98/37 EC "Machinery Directive"; 2004/108 EEC "Electromagnetic Compatibility"; 2006/95/EC "Low Voltage Directive"; 97/23/EC "Pressure equipment (PED)"
- Participation in Eurovent Certification Programmes
- Continuous quality and reliability improvement and ISO 9001



Association membership



# REFERENCES

Clivet systems have been installed in many buildings, among which:



## Residential

- Houses
- Apartments



PRIVATE HOUSE, BRETAGNE - FRA



A FILO D'ACQUA RESIDENCE, SAVONA - ITA



PRIVATE HOUSE, SALERNO - ITA



PRIVATE APARTMENT, MILANO - ITA



## Commercial

- Hotels and Restaurants



GRAND HOTEL SALERNO\*\*\*\*, SALERNO - ITA



AC HOTEL\*\*\*\*, VICENZA - ITA



GRAND HOTEL BERNARDIN\*\*\*\*, PORTOROŽ - SLO



DOMINA ROMA CAPANNELLE\*\*\*\* HOTEL, ROMA - ITA

- Cinemas and theatres



BLITZ CINESTAR, 9 SCREENS MULTIPLEX - CRO



CINECITY, 14 SCREENS MULTIPLEX, LIMENA (PD) - ITA



UCI SPINETTA M., 7 SCREENS MULTIPLEX, AL - ITA



POLITEAMA THEATRE, TRIESTE - ITA

- Retail



VULCANO BUONO (SHOPPING,CINEMA,HOTEL),NOLA -ITA



BARIBLU SHOPPING CENTRE, TRIGGIANO (BA) - ITA



PORTA DI ROMA SHOPPING CENTRE, ROMA - ITA



MCARTHUR GLEN OUTLET VILLAGE, VE - ITA



## Industrial

- Production areas
- Offices
- Process



FERRARI AUTO, MARANELLO (MO) - ITA



INARCA EQUIPMENT MANUFACTURER, PADOVA - ITA



CANTINA PRODUTTORI DI VALDOBBIADENE, TV - ITA



STATOIL REFINERY, KÅRSTØ - NOR



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