

CINECITY PADOVA

Limena, Padua - Italy

Multiplex cinema

14 screens

Multiplex Clima Solution

2005



The Cinecity at Limena has always been one of the largest and most modern multiplex cinemas in Italy. Thanks to the services on offer and the specific range of technologies, such as Dolby Digital 3D projection, it is also one of the biggest success stories in Italy. In 2010 the Cinecity chain was taken over by the The Space Cinema Group, controlled by the investors Benetton and Mediaset.

The Challenge

With its fourth multiplex cinema the Furlan Cinecity Group aimed to consolidate and add to the previous success of earlier projects.

The distinguishing feature of this new investment was once again to be the careful programming, the services on offer and the interpretation of the multiplex as a cultural facility with an ideal and unique architecture.

The overall policy on technology was to reward the investor both during building and above all during operation, guaranteeing viewing excellence and at the same time an ambitious operating result.

Environmental comfort control had to be added to key success factors such as ticketing and catering, lighting and seating, projection and sound systems.

Low noise levels, temperature, humidity and air quality required automatic management independently of the conditions outside and of auditorium occupancy.

Air quality in particular represented an ambitious goal. Due to the high flows of outside air required by current legislation, the climate control solutions used in commercial environments were in fact unsuitable.

Finally, the entire project had to be carried out with total respect for the environment, pursuant to the Group's standards and to growing awareness by an extensive and varied pool of users.



Cinecity Padova – Interior of an auditorium and entrance area to the ground level auditoriums.

The Building

- Prefabricated two-storey building
- Design and fittings in experimental pop style

The Dimensions

- 14 screens with 3,200 seats
- 2 restaurants, 4 refreshments areas, 1 multimedia bookshop

The Team

- Architectural design by Viviani_Architetti, Italy
- Systems design by Studio Gianni Vescovi, Italy
- Systems construction by Fiel, Italy

About Cinecity Art & Cinemas

The Cinecity Art & Cinemas Group numbers 6 multiplexes in Italy with a total of 69 screens. As the operator of facilities with an innovative architecture, generally recognised high quality and cutting-edge technologies, the company was entirely taken over at the end of 2010 by The Space Cinema, a company owned by Benetton and Mediaset, the result of a merger between Warner Village Cinema and Medusa Multicinema.

The Solution

As in the previous Cinecity projects, a decentralised all-air climate control system was again chosen for the entire building, based on reversible heat pump rooftop monobloc units.

Each of the 14 auditoriums adopts units designed especially for places with high occupancy, able to handle up to 70% outside air for the necessary exchange. The amount of outside air supplied is regulated automatically according to the effective needs measured by the integrated CO₂ air quality probe. The equipment also includes fans with electronic control of the air flow rate, automatic Freecooling and active and high-efficiency thermodynamic energy recovery from the exhaust air.

The air conditioned by the units is distributed in the building via galvanised steel ducts installed in the double ceiling and fed into the rooms via circular diffusers with helicoidal pattern, adjustable according to the height and depth of the throw required. The air is recovered in the lower area behind the screen.

A similar solution was adopted for the foyer, box office, bar and cafeteria, except for the units which are designed especially for areas with average occupancy. The air is distributed via exposed pipes with eye-catching decorations and diffused via diffusers of different geometrical structures.

The corridors leading to the auditoriums and projection rooms are also climate controlled with similar units which condition a mixture of outside air and recycled air without an exhaust fan. The overpressure air, equal to the intake of outside air, is recovered in the service areas on the various levels, while in the projection rooms area it is aspirated and expelled by fans installed on the projection machinery.

The Results

The specially designed Clivet system maintains regular control of temperature, humidity and air quality in the auditoriums, with a concentration of carbon dioxide lower than 1,000 parts per million thanks to the efficient air exchange regulation system. Audience comfort is also guaranteed by the very low noise levels of the system both inside and outside.

Decentralisation of the system allows local production of cooling or heating energy, only when and where it is needed and autonomously in the various areas. Alongside the high energy efficiency of the single units, this allows a saving in primary energy of over 40% compared to a central hydronic system.

Thanks to the heat pump technology the same system is used throughout the year, avoiding the need to construct a central heating unit with the related costs and red tape. The high efficiency has also reduced energy consumption, leading to a pleasing improvement in the operating result.

With Multiplex Clima System already serving all its 45 auditoriums, Cinecity has therefore chosen it yet again for its future 12-screen multiplex cinemas in Cagliari and Parma.

For further details on Clivet systems
www.clivet.com



Cinecity Padova – Specialised rooftop heat pumps.

The System

- 16 rooftop Clivet CSNX air to air heat pumps with integrated active thermodynamic recovery for areas with high occupancy, serving the auditoriums.
- 9 rooftop Clivet CRSN air to air heat pumps for areas with average occupancy, serving the foyer, restaurants, shop, projection rooms and offices.

About the Multiplex Clima Solution

The all-air Multiplex Clima climate control system is based on high-efficiency rooftop heat pumps, designed specifically for the functional needs of the various areas of a multiplex cinema. They feature high air exchange capacity, fans with electronic control, integrated thermodynamic energy recovery system and silencers fitted on the machine. The monobloc construction considerably simplifies both their installation and operation. The Multiplex Clima Solution also includes the centralised supervision system with intuitive graphic interface.