



## District cooling

Energy-efficient, compact and easy-to-maintain district cooling solutions



It should come as no surprise that district cooling – using a central source to supply cooling to a number of buildings instead of multiple individual systems – is widely used. A district cooling solution is very energy-efficient and easy for property owners to operate. It is also perfect for historical buildings and architectural gems that prohibit individual air-conditioning units, and where space is often limited.



## Cool buildings the smart way

District cooling begins by chilling water in a central plant. A cold-water storage facility can also be used to take advantage of off-peak power rates. Cold water is then pumped through the district cooling system to heat exchangers in different buildings. The heat exchangers are used to transfer the cold from the pipeline to the internal systems. After the cold has been used in air conditioning around the building units, the warmed water returns to the heat exchangers for cooling again.

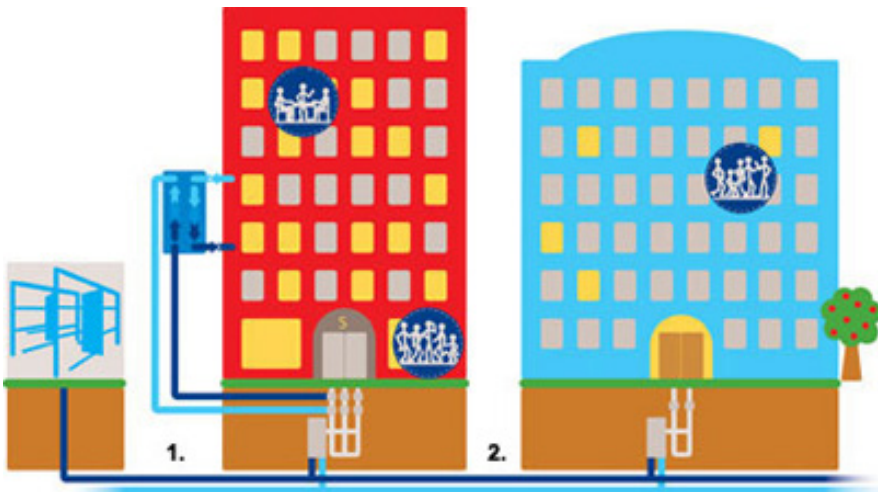
## Economical, flexible and quiet cooling

District cooling is the most convenient method for the production and distribution of cooling for commercial purposes, providing both economic and environmental benefits. Alfa Laval district cooling systems offer operating flexibility, since each building can use as much or as little cooling as needed, without worrying about chiller size or capacity – and the

system produces no noise or vibrations. Hotels, shopping centres, industrial buildings, office buildings, residential buildings, sports centres and hospitals are examples of facilities that use district cooling. Alfa Laval can also aid in the cleaning of the heat exchangers.

## The west's largest district cooling system

France's Climespace is the biggest district cooling network in the western world and the only of its kind in Paris. Alfa Laval developed a standardized concept for complete sub-station units for Climespace, rather than just heat exchangers, ensuring reliable quality, fast response, high performance and low prices for the new products. We also offered engineering support for further development, as well as reliable service and maintenance of existing equipment.



1. In a district cooling solution, cold water is produced in a central chiller plant. A gasketed plate-and-frame heat exchanger can be used either as a condenser (hot side) or evaporator (cold side), offering considerable advantages in terms of space, efficiency and maintenance. A cold-water storage facility can also be used to take advantage of off-peak power rates.

2. Cold water is pumped through the district cooling system (dark blue flow) to a heat exchanger in a building such as a shopping mall, office block or hotel. The heat exchanger is used to transfer the cold from the high-pressure pipeline to the lower-pressure internal system (dark blue flow).

After use in air handling units, the warmer water (light blue flow) returns to the heat exchanger for cooling again. Higher-temperature return water from the basement heat exchanger (light blue flow) is pumped back into the district cooling system and returns to the chiller.

Alfa Laval reserves the right to change specifications without prior notification.

### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).