



Free cooling

Free cooling combines an environment-friendly alternative for producing cold with economical benefits. Cooling applications relying on free cooling have been installed with good results in many countries around the world.

When utilizing free cooling as a cooling source in an application, the use of ecologically harmful refrigerants can be reduced. Free cooling is also a way to cut down on electricity costs – in some cases the reduction might exceed 75 percent, resulting in great savings. Reduction in electricity consumption also has positive environmental effects, as electricity production often involves air pollution.

Free cooling is used mainly for air conditioning and process cooling. It can cover the cooling requirements during the period when the free cooling source has lower temperature than the cold water, for example during winter. In spring and autumn a combination of free cooling and chiller-produced cold is used. In the summertime the chiller

supplies the total cooling requirement. Suitable free cooling sources are water from for example rivers, lakes, (deep) oceans or ground water, ice and snow storage, or air.

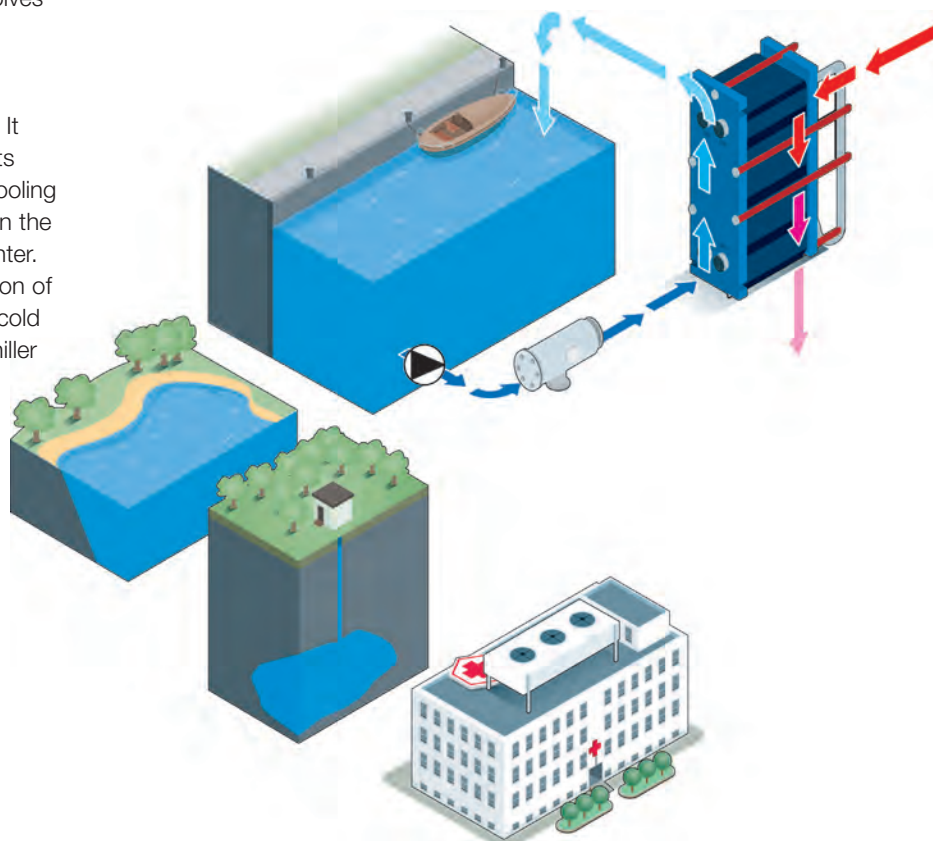
Products for free cooling

Alfa Laval's continuous research and development strategy means we are able to supply products for any cooling application, regardless of cooling media and cooling source. This makes it possible to utilize aggressive cooling media such as sea-water, brackish water, or water from rivers and wells.

By installing a plate heat exchanger, the chilled water loop can be totally isolated from sensitive equipment like air conditioners, thereby eliminating corrosion, scaling and constant maintenance. In seawater and fresh-water applications, installation of a filter for protecting the heat exchanger is recommended.

A cooling system using free cooling in combination with a plate heat exchanger will also require less space, creating an extremely compact solution.

But Alfa Laval is more than outstanding products and optimized solutions. Based on our vast experience we are always able to provide quality solutions.



Free cooling has many economical and environmental advantages. Alfa Laval's knowledge about for example corrosive media has resulted in products that can handle aggressive cooling media like seawater and brackish water.