



# Chiller bypass

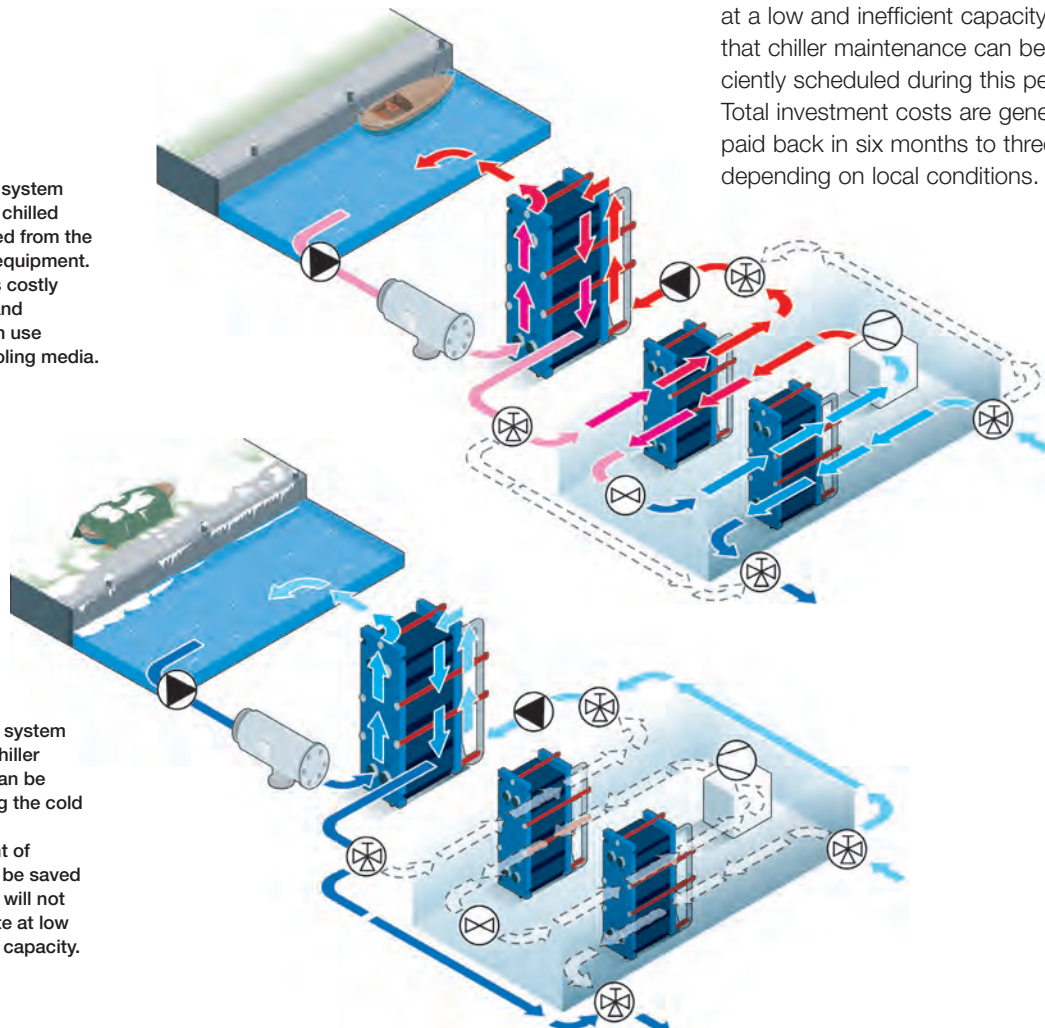
Traditionally the chiller in an air conditioning system runs continuously during the entire cooling season, even when full capacity is not required. Previously, the only alternative to constant chiller operation has been a chiller bypass system using a strainer. This strainer removes impurities, but at the same time it requires costly maintenance, chlorination and other chemical treatment.

By installing a plate heat exchanger – and sometimes a filter to protect it – in the chiller bypass system, corrosion, scaling and constant maintenance can be virtually eliminated. Another advantage is that this system can use any type of cooling, such as a cooling tower or free cooling with river or well water, even seawater or brackish water,

without ruining sensitive equipment like air conditioners.

As soon as the bulb drops below the required condenser temperature (min. 1°C/1.8°F), the heat exchanger makes it possible to reduce the chiller temperature. This means that a large amount of electricity can be saved during the cold season. It also means that the chiller will not have to operate at a low and inefficient capacity, and that chiller maintenance can be efficiently scheduled during this period. Total investment costs are generally paid back in six months to three years, depending on local conditions.

**Chiller bypass system (summer).** The chilled water is isolated from the other cooling equipment. This minimizes costly maintenance and the system can use aggressive cooling media.



**Chiller bypass system (winter).** The chiller temperature can be reduced during the cold season. A large amount of electricity can be saved and the chiller will not have to operate at low and inefficient capacity.