



# Pressure interceptor

In skyscrapers, the static head creates a pressure that may exceed what the chiller condenser or room air conditioners can handle. A plate heat exchanger will then split the circuit in order to keep the pressure at an acceptable level. It is possible to put plate heat exchangers on different levels throughout the building, thus limiting the pressure and the corresponding requirements on, for example, pumps, piping and valves.

Depending on the size of a skyscraper there might be many plate heat exchangers acting as pressure interceptors. It is very important that cold is not wasted in the cooling system. Alfa Laval's "close approach" when it comes to energy efficiency means that the heat exchangers will transfer practically all cold to the top of the building with minimum loss.

## Advantages of plate heat exchangers as pressure interceptors

The entire chilled water system will be designed for low pressure, for example 10 bar (150 psig). This means cost savings in the chiller as well as in the selection of air handling units and other system equipment. Instead of having many chillers in a building, plate heat exchangers can be placed on several floors as pressure interceptors. This has a positive effect on building design:

- They are very compact and only require normal room height, i.e. <3 m/10 ft, and only a third of the floor space of a chiller with identical capacity. This makes them easy to install, even in buildings with limited space.

- They do not cause any vibrations or noise. This will save money for the owner as the rest of the floor can be rented out without the tenants being disturbed.
- They do not normally need any maintenance attention, apart from a planned maintenance consisting of a gasket replacement approximately every 10-12 years.

**PHEs used as pressure interceptors in tall buildings protect other equipment like chillers and air condition units from excessive pressure. It is a compact, low-noise, no-worries solution.**

