Condensation in the chiller system is most often performed in a set of large shell-and-tube heat exchangers. These condensers are often designed with a tight temperature approach, making performance very sensitive to scaling and fluctuating cooling-water temperatures. The results are high maintenance costs and production loss.

Fluctuating chiller load over the year leads to variations in the velocity of the incoming gas. This may cause vibrations and damages in the tube bundle, leading to unplanned repairs.

Alfa Laval can supply customized solutions that help solve these problems and boost capacity. Alfa Laval has long experience in industrial refrigeration and can deliver everything from a single booster condenser to complete systems including vaporizer and condensers.

Compabloc’s high thermal efficiency and low pressure drop makes it ideal for condensing duties, especially where space is limited. Its compact size means it is easily added to existing systems to remedy capacity problems.

Cleaning intervals for shell-and-tube condensers can be prolonged by installing a Compabloc as a booster. When fouling starts to build up or the cooling water temperature rises, Compabloc compensates for the capacity loss in the shell-and-tubes.

The robust, all-welded design makes Compabloc insensitive to vibrations, eliminating the need for repairs. The highly turbulent flow means it is much less prone to fouling on the cooling-water side, and keeps cleaning to a minimum.
C3R chiller condensers

Combat capacity limitations with a booster condenser, either in parallel or series.

Before After

C3R vapour 47°C (117°F) C3R 85% liquid 46°C (115°F)

C3R vapour 47°C (117°F) C3R 95% liquid 46°C (115°F)

C3R 100% liquid 45°C (113°F)