



## Safety and efficiency with a small footprint

### Alfa Laval SmartTurn® flooded ammonia chiller

#### Turn to efficiency

The Alfa Laval SmartTurn® enhances the safety of your facility by reducing the refrigerant charge. It's like having an engineer monitoring your engine room, letting you know when it is time to drain oil, reporting fluid levels and monitoring efficiency.

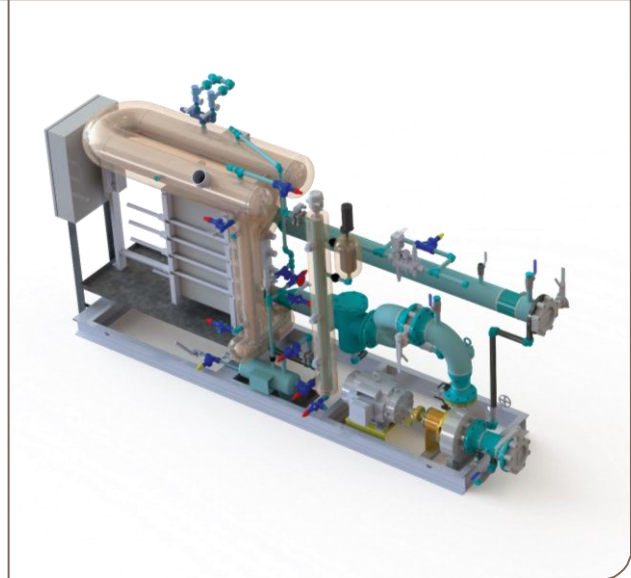
The system achieves high suction temperatures with the lowest temperature approach of any heat exchanger technology giving the lowest power consumption possible.

To optimize the efficiency of the heat exchanger, Alfa Laval has developed the U-Turn® separator. The U-turn® is a liquid separator especially designed for use with plate heat exchangers in ammonia applications. Installed above the plate heat exchanger, the self-contained U-Turn can be easily mounted onto the compatible model (M10, MK15 or TK20).

The module provides a compact installation that has smaller overall dimensions than any other solution. Included are the separator, plate heat exchanger, instruments and controls, ensures a safe, reliable and efficient solution for your ice rink.

#### Opening a new chapter in evaporation

- No ammonia carry over at the suction due to the use of four different separation methods and large settling area/length utilising the patented U bend
- Low/critical ammonia charge
- Standard integrated oil pot volume for manual drain with possibility for automatic oil return
- The latest Alfa Laval plate heat exchanger technology



#### Smart Features and condition monitoring:

- Pump coupling failure notification, service notifications and runtime evaluation
- Refrigerant overcharge protection and optimal operating levels, with notifications of operational deviations
- Power consumption monitoring and reporting for energy audits
- Oil management with oil drain logging at the panel for maintenance
- Heat exchanger efficiency notifications
- Filter condition, expansion tank level monitoring, pH monitoring and leak prediction of the coolant process
- Relief valve status notification
- Low suction pressure warnings on the refrigerant process side
- Easy to use interface with touch screen controls, remote access possibilities, remote alarming and monitoring capability
- Maintenance reminders

## The U Turn and the Plate Heat Exchanger – the heart of the SmartTurn®



Nozzles for preferred oil drain method – various oil drainage options



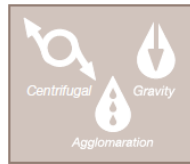
Predefined liquid level and charge – information to run U-Turn module at peak performance



Check valve for start-up flow control – immediate safety operation



Self-contained unit – easy installation and full access, no skids or frame required

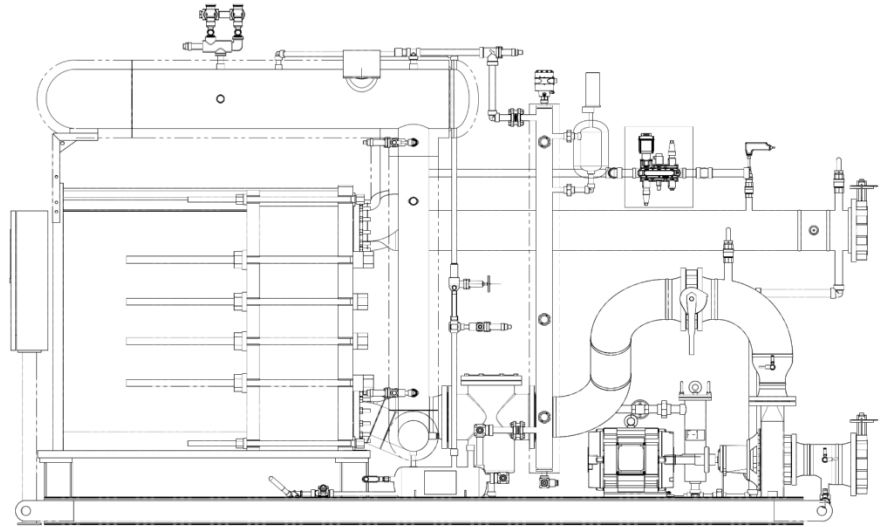
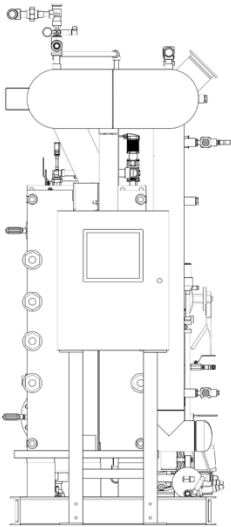


Multiple separation methods – enhanced separation efficiency and extremely low ammonia charge



Nozzles for regulation and control devices – allow the option of preferred control system

## Capacity, Dimensions and weights



System	Length	Width	Height	Shipping weight (Approx.)
80TR Ethylene Glycol*	162 3/4 " / 4134 mm	39 1/2 " / 1003 mm	86 3/8 " / 2194 mm	5000 lbs / 2268 kg
100TR Ethylene Glycol*	186 1/2 " / 4737 mm	49 " / 1245 mm	112 " / 2845 mm	5000 lbs / 2268 kg
120TR Ethylene Glycol*	189 1/2 " / 4813 mm	49 " / 1245 mm	111 3/4 " / 2838 mm	5000 lbs / 2268 kg
80TR Brine*	162 3/4 " / 4134 mm	39 1/2 " / 1003 mm	86 3/8 " / 2194 mm	5000 lbs / 2268 kg
100TR Brine*	180 3/4 " / 4591 mm	51 " / 1295 mm	106 3/4 " / 2711 mm	5000 lbs / 2268 kg
120TR Brine*	184 3/4 " / 4693 mm	51 " / 1295 mm	106 3/4 " / 2711 mm	5000 lbs / 2268 kg

\*Based on standard conditions with 18°F (-7.8°C) in, 15°F (-9.4°C) out with evaporation temperature of 11°F (-11.6°C)

Alfa Laval reserves the right to change specification 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)



### How to find out more information on SmartTurn®

Visit our website at [www.alfalaval.ca/smartturn](http://www.alfalaval.ca/smartturn)



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