Alfa Laval Cooling Pod (TM)

Modular containerized cooling solution for edge data centers

Introduction

The Alfa Laval Cooling Pod is the answer to plug and play data center cooling. Designed as a standard shipping container, the Cooling Pod is a modular containerized solution to allow rapid deployment and easy setup.

Application

The Cooling Pod is designed for data centers using direct-to-chip, cold plate and immersion cooling in either direct cooling (glycol/water to air) or indirect (dielectric to glycol water to air) configurations.

Benefits

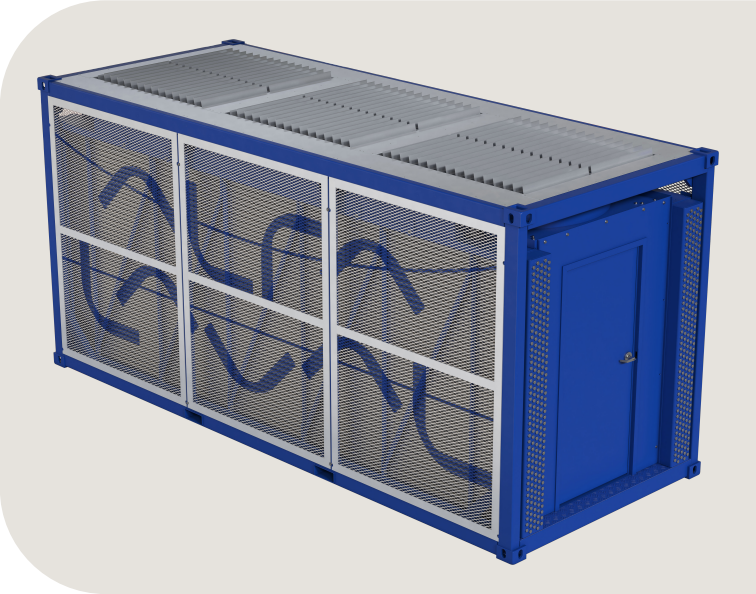
- The containerized design allows for ease of transportation
- Self-contained design enables the user to simply connect power and piping
- Modular design allows for increments of 500kW or 1MW to be deployed and scaled to the load
- Solution can grow as your data center grows
- Waterless cooling makes it ideal for water scarce environments and reduces the overall carbon footprint

Configurations

The Cooling Pod is available in several configurations to meet the needs of the Data Center market.

- 500 and 1000 kW* modular designs
- Dry-cooler only for cold plate and direct-to chip or other glycol/water cooling applications
- Dual loop gasketed plate option includes a dry-cooler plus a GPHE unit for larger applications where isolation of loops is ideal (building cooling loop) or where dielectric is used on larger (500kW or greater) loads
- Dual loop brazed plate option includes a dry-cooler plus 4-10 BHE units for dedicated loops usually going to immersion cooling tanks

*Actual heat transfer varies based on ambient conditions.



Working principle

The Cooling Pod combines Alfa Laval's energy-efficient air-cooled heat exchanger technology with plate heat exchanger technology to cool edge-computing hardware. Variable frequency drives increase the performance of the Cooling Pod even further by adjusting the cooling effect to the prevailing conditions, saving additional energy in the process.

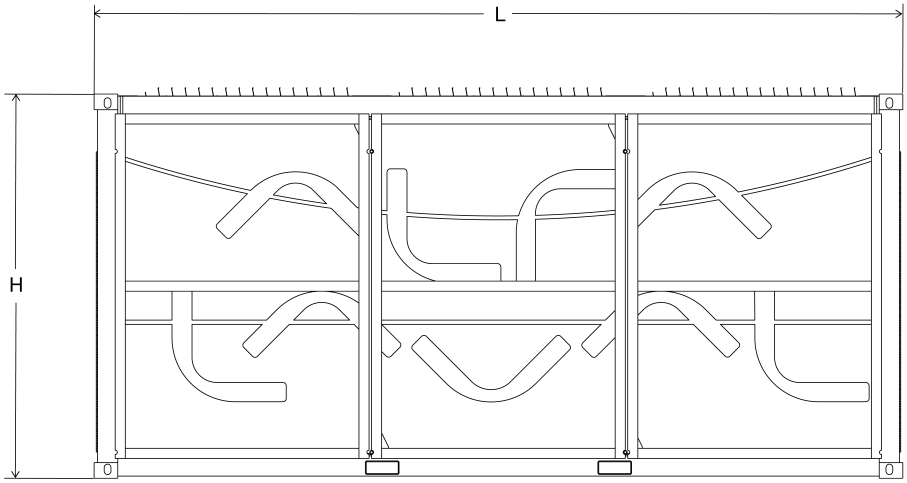
Unique features

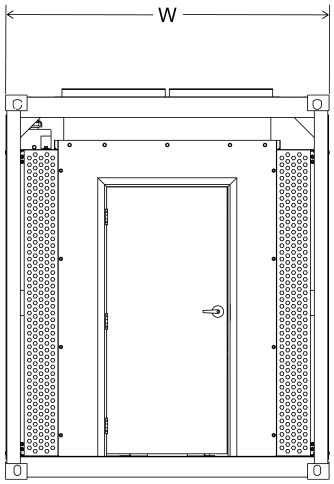
HyperFin
Slitted fin design maximizes heat transfer.

ALOnsite
Global, onsite service by skilled engineers.

Learn more at **www.alfalaval.com/coolingpod**

Dimensional drawing





Model Number	Nominal Capacity	No. of Fans	Dimensions, feet (m) Length (L)	Width (W)	Height (H)	Dry Cooler Bundles	Controls
ALCP-2-20	500 kW	2	19.9' (6.1)	8' (2.4)	9.5' (2.9)	1	No Electrical
ALCP-2-20-FV	500 kW	2	19.9' (6.1)	8' (2.4)	9.5' (2.9)	1	Full VFD
ALCP-2-20-1V	500 kW	2	19.9' (6.1)	8' (2.4)	9.5' (2.9)	1	Single VFD
ALCP-2-20-SS	500 kW	2	19.9' (6.1)	8' (2.4)	9.5' (2.9)	1	Start/Stop
ALCP-3-20	1000 kW	3	19.9' (6.1)	8' (2.4)	9.5' (2.9)	2	No Electrical
ALCP-3-20-FV	1000 kW	3	19.9' (6.1)	8' (2.4)	9.5' (2.9)	2	Full VFD
ALCP-3-20-1V	1000 kW	3	19.9' (6.1)	8' (2.4)	9.5' (2.9)	2	Single VFD
ALCP-3-20-SS	1000 kW	3	19.9' (6.1)	8' (2.4)	9.5' (2.9)	2	Start/Stop

*Table only includes base models. Additional models and options are available in the pricing tool and through the ACE sales team.

Technical data

Pressure vessel (bundle) options	
Bundle options	Tube bundles, straight finned tube, crossflow design
Header construction	Non-code, rectangular tubing headers
Header material	Carbon steel
Tube material	0.75" SA-214 Carbon steel
Fin style	HyperFin L-footed
Bundle accessories	Surge tank included

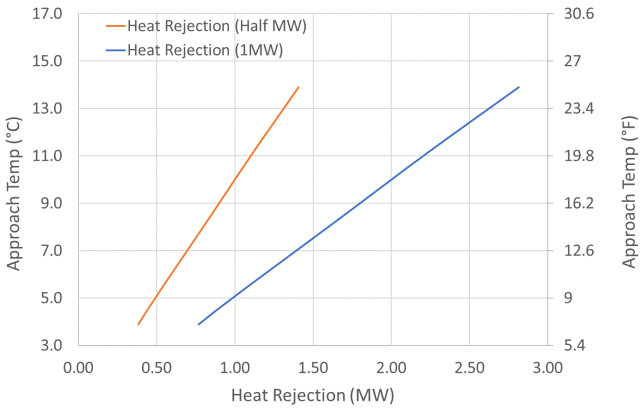
Fan/mechanical options	
Fans	Diameter 60"
Motors	Totally enclosed fan cooled (TEFC)

Structure options	
Construction	Bolted steel with welded and painted
Bundle guards	Aluminum expanded metal
Louvers	Backdraft prevention louvers included
Secondary heat exchanger	Alfa Laval Brazed or Gasketed Plate Heat Exchanger

Control options	
Controls	Start/stop, Single VFD, Full VFD

Heat Rejection vs. Approach Temp

SI units



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