



# Hybrid and Adiabatic Products

Balance Water and Energy Savings

**D2** OVERVIEW

**D5** HXV HYBRID COOLER







**D17** NEXUS® MODULAR HYBRID COOLER

**D27** TRILLIUMSERIES™ ADIABATIC COOLER (TRF)

**D37** TRILLIUMSERIES™ ADIABATIC PRODUCTS (TSDC, TSDC2 & TSDF2)

# Hybrid and Adiabatic Products

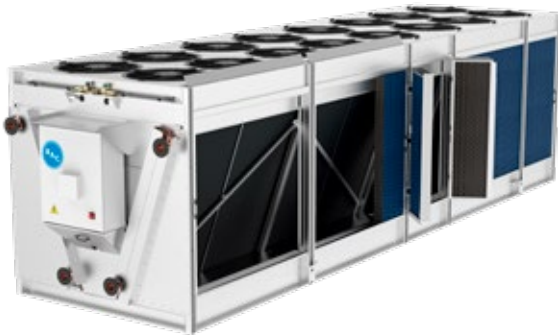





Hybrid and adiabatic products provide customers the best of both worlds: 1) evaporative cooling for hot design days and 2) dry cooling for most of the year to conserve water and reduce maintenance. These products are designed for reliable operation to optimize energy and water usage.

Model Name	HXV Hybrid Cooler	Nexus® Modular Hybrid Cooler
		
Configuration <sup>[1]</sup>	Hybrid / Combined Crossflow	Hybrid
Fan System	Axial Fan / Induced Draft	EC Fan System / Controls
Thermal Capacity	Large Tonnage	Small Tonnage
Modes of Operation	Energy Saver Mode • Adiabatic Mode • Water Saver Mode	Energy Saver Mode • Nexus Mode • Water Saver Mode
Water & Energy Usage <sup>[3]</sup>	  WATER USAGE      ENERGY USAGE	  WATER USAGE      ENERGY USAGE
Reasons to Choose	<ul style="list-style-type: none"> <li>Maintains peak system performance for a variety of applications where water is scarce, water costs are high, uptime is critical, and/or plume is a concern</li> <li>Up to 70% water savings due to a high dry switch point and more dry operating hours</li> <li>IBC Compliant</li> </ul>	<ul style="list-style-type: none"> <li>Compact design for constrained spaces, including indoors, 8.5' height</li> <li>Modules can easily be added to increase capacity</li> <li>Corrosion-resistant materials, zero passivation</li> <li>Movable by pallet jack through service elevator</li> <li>Significantly reduced spray water basin maintenance costs with the patented DiamondClear® Design by minimizing scale build-up and biological growth, optional UV System for best water quality</li> </ul>



**NOTES:**

1. For additional information on combined crossflow see "Configurations" on page J5.
2. For more ways to optimize operation see page D34 for the TRF and page D44 for the TSDC, TSDC2 & TSDF2.
3. These dials note the product's overall water and energy use. There are multiple modes of operation that balance water and energy. In comparison, cooling towers use the least energy and the most water while air cooled equipment uses the most energy and no water. To balance water and energy savings for your project, contact your local BAC Representative.

TrilliumSeries™ Adiabatic Cooler (TRF)	TrilliumSeries™ Adiabatic Products (TSDC, TSDC2 & TSDF2)
	
Adiabatic	Adiabatic
EC Fans / Controls	EC Fans / Controls
Medium Tonnage	Medium Tonnage
Pre-Cooler Mode • Dry Mode <sup>[2]</sup>	Pre-Cooler Mode • Dry Mode <sup>[2]</sup>
  <p style="text-align: center;">WATER USAGE      ENERGY USAGE</p>	  <p style="text-align: center;">WATER USAGE      ENERGY USAGE</p>
<ul style="list-style-type: none"> <li>Innovative water management system with adiabatic pads, dual pump design, recirculating system, and intelligent and intuitive controls</li> <li>High dry switchpoint</li> <li>Up to 20% energy savings and 20% smaller footprint compared to existing adiabatic alternatives</li> <li>Single-piece lift with no field assembly required</li> <li>Large access doors and easy pad access; inspect and maintain from the outside</li> </ul>	<ul style="list-style-type: none"> <li>For commercial and industrial refrigeration applications; CO<sub>2</sub>, ammonia and fluid cooler models available</li> <li>Reduce peak energy use by 44% vs. traditional air-cooled products</li> <li>High dry switchpoint</li> <li>Achieve lowest condensing temperatures and compressor energy savings year-round with BAC's highest-efficiency and fully-wetted pre-cooler pads and daily self-clean protocols</li> <li>Over ten years of successful proven performance with thousands of installations worldwide</li> <li>Easy-to-remove coated pads are UV and algae resistant with a no-struggle frame that enable easy removal for coil inspections</li> </ul>

## Hybrid and Adiabatic Products

Both hybrid and adiabatic equipment balance water and energy.

### Hybrid

Hybrid products harness the energy efficient power of evaporative cooling while having additional dry or hybrid modes as part of the product's operation. Hybrid products are ideal for applications initially considering traditional cooling towers but want the option to save more water while having the energy efficient benefits of cooling towers.



### Adiabatic

Adiabatic is a form of heat rejection technology that is more energy efficient than dry coolers or condensers and uses less water than evaporative cooling. BAC's adiabatic products provide the lowest energy and water costs, highest reliability and easiest installation. They are ideal for water constrained applications and as a substitute for air cooled products.



For more information, see "Understanding Dry Cooling, Evaporative Cooling, Adiabatic Cooling, and Hybrid Fluid Cooling Solutions " on page J2.