

Mission Critical Solutions





- The need for more efficient, liquid cooling designs has never been greater due to the ever increasing power density of data centers, combined with rising energy costs.
- Taco Comfort Solutions offers energy efficient, **Mission Critical Rated Products** that help data center owners optimize their liquid cooling systems and decrease their maintenance costs and PUE.
- Featuring upgraded materials of construction, Taco's Mission Critical Rated Products help data centers increase their efficiency, reliability, and longevity.

— **Liquid cooled data center solutions**

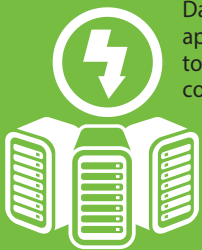
— **Dielectric fluid compatible**

— **Optimizes chiller performance to improve data center efficiency**

— **Stainless steel construction**

— **Dependable, energy efficient, and corrosion resistant**

Data Center Industry Stats



Data Centers use approximately 2% of total U.S. electricity consumption, representing over **70 Billion kWh.**

An estimated **40% to 60%** of a data center's operating costs are generated by **humidity** and **temperature control**, according to the DOE.



Data Centers with hydronic cooling components comprise up to 41% of the 2017 market and are **projected to grow 12-15%** annually until 2022.



Energy-Efficient KS Series Vertical Split-Coupled In-Line Pumps and FI Series Base-Mounted End Section Pumps

- Easy installation and quiet, dependable performance
- Taco's patented SelfSensing ProBalance® technology provides accurate, do-it-yourself system balancing, reducing construction costs, energy usage, and increasing pump life expectancy
- Stainless steel shaft & impeller options
- Energy efficient, ECM motor options from 3HP – 60HP, providing longer service life, lower maintenance costs and lower operating temperature
- Upgraded seals including dielectric fluid-ready Ni-Resist/Viton seals



Durable Multi-Purpose (MPT) and Buffer Tanks

- Designed and built to ASME standards
- Corrosion resistant stainless steel construction
- BAS-friendly automatic blow-down valve
- Convenient clean-in-place (CIP) system reduces maintenance costs and down time



Energy consumption by data centers can be **reduced by 20% to 40%** when energy-efficiency strategies are implemented.



Dependable Plate & Frame Heat Exchangers

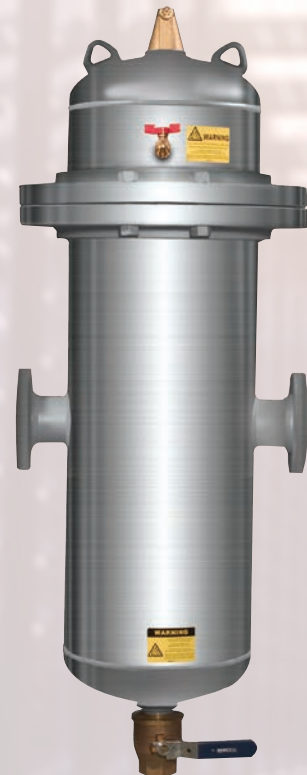
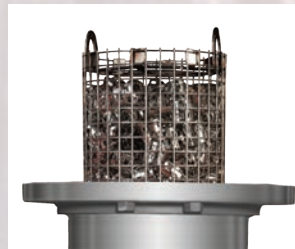
- Designed and built to ASME standards
- High-strength, corrosion resistant stainless steel frame plates
- High-strength, corrosion resistant stainless steel heating plates
- Dielectric fluid-ready Viton gaskets



*Plate & Frame
Heat Exchanger*

4900 Series High-Efficiency Micro-Bubble Air & Dirt Separator

- Unique PALL ring technology provides superior air and dirt separation
- Designed and built to ASME standards
- BAS-friendly automatic blow-down valve
- Durable stainless steel construction
- Convenient clean-in-place (CIP) system reduces maintenance costs and down time



4900 Series



Tier	KS Series & FI Series Pumps*	MPT Tank**	Buffer Tank**
Tier 1	Cast Iron Casing 125# Flange Connection Ceramic/EPT Seal Stainless Steel Shaft ODP (open drip proof) Motor	125PSI @ 240° F Carbon Steel Construction	125PSI @ 375° F Carbon Steel Construction
Tier 2	Ductile Iron Casing 250# 125# Flange Connection Silicon Carbide/EPT Seal ODP (open drip proof) Motor	Extended Serviceable Life 150PSI @ 240° F Carbon Steel Construction Integral Air Vent with Maintenance Shut-off Valve BAS-Friendly Automatic Blow-Down Valve	Extended Serviceable Life 150PSI @ 240° F Carbon Steel Construction
Tier 3	Ductile Iron Casing 250# 125# Flange Ni-Resist/Viton Seal (dielectric fluid-ready) TEFC (totally enclosed, fan-cooled) Motor	Extended Serviceable Life 150PSI @ 240° F Carbon Steel Construction Integral Air Vent with Maintenance Shut-off Valve BAS-Friendly Automatic Blow-Down Valve Clean-in-Place (CIP) System	Extended Serviceable Life 150PSI @ 240° F Carbon Steel Construction Automatic Blow-Down Valve Clean-in-Place (CIP) System
Tier 4	Ductile Iron Casing 250# 125# Flange Connection Ni-Resist/Viton Seal (dielectric fluid-ready) ECM High-Efficiency Motor VFD	Extended Serviceable Life 150PSI @ 240° F 304L or 316L Stainless Steel Construction Integral Air Vent with Maintenance Shut-off Valve BAS-Friendly Automatic Blow-Down Valve Clean-in-Place (CIP) System	Extended Serviceable Life 150PSI @ 240° F 304L or 316L Stainless Steel Construction Automatic Blow-Down Valve Clean-in-Place (CIP) System

* SelfSensing ProBalance technology, stainless steel impellers available on all pumps

** Silicon/Fiberglass, Armaflex, Polyisocyanurate, & Aluminum Jacket insulation options on all MPT and Buffer tanks

Rated Products

Plate & Frame Heat Exchanger	4900 Series Air/Dirt Separator
<p>150PSI @ 230° F</p> <p>0.35mm 304L or 316L Stainless Steel Heating Plates</p> <p>Carbon Steel Frame Plate, Pressure Plate & Upper Carry Bar</p> <p>Carbon Steel Lower Guide Bar with Stainless Steel Sleeve</p> <p>NBR-HT Gaskets</p>	<p>125PSI & 150PSI @ 240° F</p> <p>Carbon Steel Construction</p> <p>2" to 36" Line Size</p>
<p>150PSI @ 230° F & 300PSI @230° F</p> <p>0.5mm/0.6mm 304L or 316L Stainless Steel Heating Plates</p> <p>Carbon Steel Frame Plate, Pressure Plate & Upper Carry Bar</p> <p>Carbon Steel Lower Guide Bar with Stainless Steel Sleeve</p> <p>NBR-HT Gaskets</p>	<p>Extended Serviceable Life</p> <p>150PSI @ 240° F</p> <p>Carbon Steel Construction</p> <p>Removable Cover</p> <p>Integral Air Vent with Maintenance Shut-off Valve</p> <p>BAS-Friendly Automatic Blow-Down Valve</p>
<p>150PSI @ 230° F & 300PSI @230° F</p> <p>0.5mm/0.6mm 304L or 316L Stainless Steel Heating Plates</p> <p>316L Stainless Steel Frame Plate</p> <p>Carbon Steel Pressure Plate, Upper Carry Bar</p> <p>Carbon Steel Lower Guide Bar with Stainless Steel Sleeve</p> <p>Viton Gaskets (dielectric fluid-ready)</p>	<p>Extended Serviceable Life</p> <p>150PSI @ 240° F</p> <p>Carbon Steel Construction</p> <p>Removable Cover</p> <p>Integral Air Vent with Maintenance Shut-off Valve</p> <p>BAS-Friendly Automatic Blow-Down Valve</p> <p>Clean-in-Place (CIP) System</p>
<p>150PSI @ 230° F & 300PSI @230° F</p> <p>0.5mm/0.6mm High Strength/High Corrosion Resistant Titanium Heating Plates</p> <p>Duplex 2205 Stainless Steel Frame Plate</p> <p>Carbon Steel Pressure Plate, Upper Carry Bar</p> <p>Carbon Steel Lower Guide Bar with Stainless Steel Sleeve</p> <p>Viton Gaskets (dielectric fluid-ready)</p>	<p>Extended Serviceable Life</p> <p>150PSI @ 240° F</p> <p>304L or 316L Stainless Steel Construction</p> <p>Removable Cover</p> <p>Integral Air Vent with Maintenance Shut-off Valve</p> <p>BAS-Friendly Automatic Blow-Down Valve</p> <p>Clean-in-Place (CIP) System</p>

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