

NAUTILUS PRODUCT DATA SHEET

EcoCore FCD



Data Hall Cooling Distribution Unit for High-Density AI, HPC, and Liquid Cooled Data Centers

EcoCore FCD is a scalable, facility-wide CDU designed to handle the high-performance cooling demands of AI and high-density environments.

- First CDU engineered for entire data halls, not just in-row cooling.
- Supports parallel CDU operation in high-capacity cooling blocks without infrastructure upgrades.
- Delivers up to 4,000kW of heat rejection capacity per unit.

Flexible Liquid Cooling Methods

EcoCore FCD supports a wide range of liquid cooling methods, ensuring adaptability to different facility needs.

- Supports direct-to-chip, immersion, rear-door, and traditional hot aisle cooling.
- Compatible with freshwater, saltwater, graywater, and industrial systems.
- Zero water consumption when connected to natural water sources.

Patented Leak Prevention System

EcoCore FCD protects your system with patented air removal and intelligent pressure control.

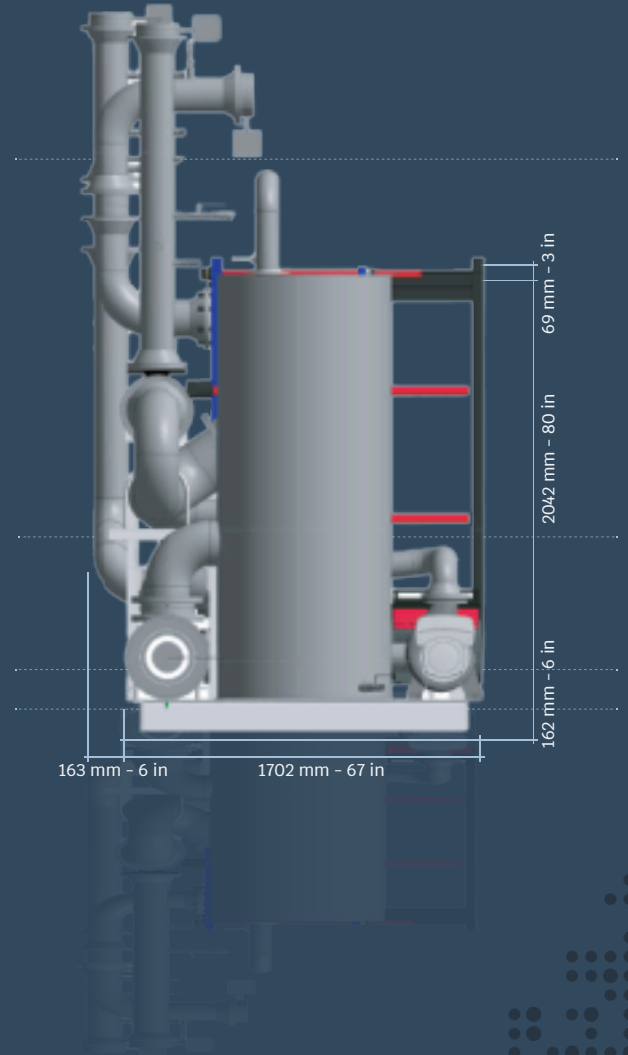
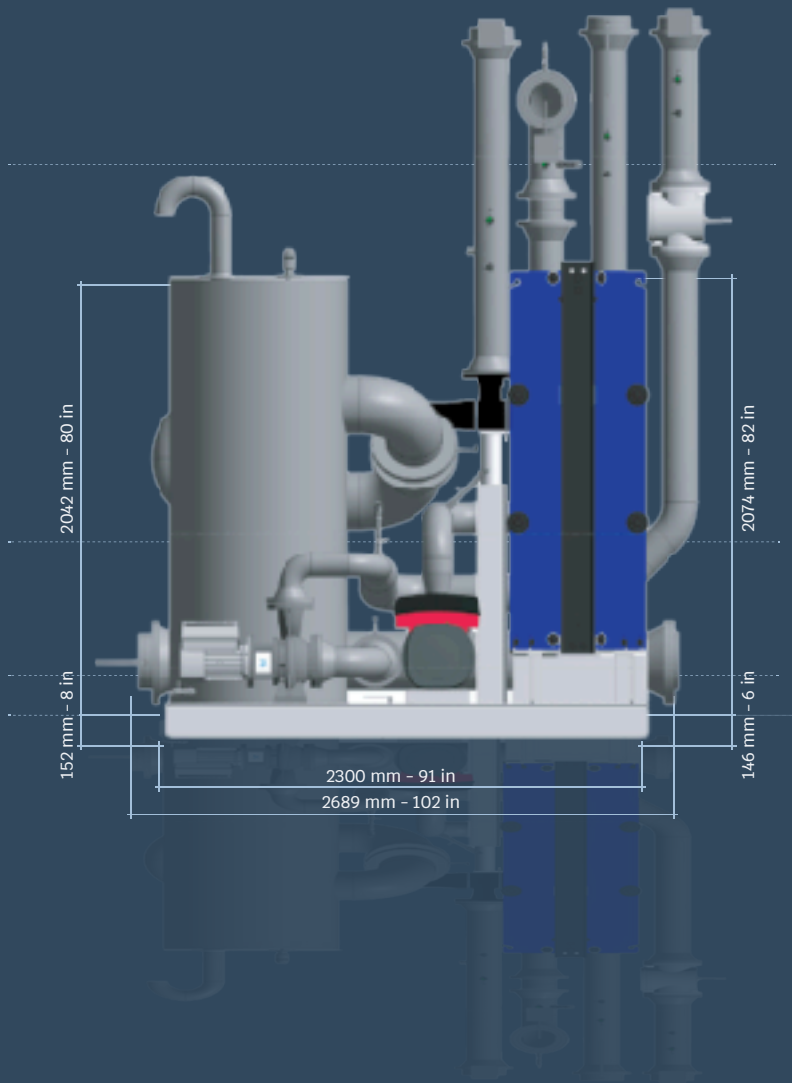
- Delivers precise control of pressure differential across supply and return.
- Features leak-proof operation powered by proven Nautilus technology.
- Compatible with diverse facility hydraulic and differential pressure conditions.
- Ideal for greenfield and retrofit deployments.

Built for Reliability and Scalability

EcoCore FCD is designed to scale and evolve alongside data center growth.

- Configure-to-order options, including higher-pressure capabilities, side-stream and full-stream filtration, and factory-integrated modules with parallel CDUs for scalable, high-capacity cooling.
- Supports both legacy systems and next-generation cooling technologies.
- Regional integrators help bypass supply chain delays, ensuring fast deployments.
- Vendor-agnostic design enables integration with a range of infrastructure and systems.

EcoCore FCD Unit



	LPS Mode <i>Leak-free operation</i>	Hybrid Mode <i>Mixed-pressure for complex loads</i>	+P Config <i>High-pressure for peak performance</i>
¹ Cooling Capacity	2340 kW	3120 kW	3900 kW
Approach [ATD]	1.5°C [2.7°F]	1.5°C [2.7°F]	4°C [7.2°F]
TCS Temperature Delta [ΔT]	20°C [36°F]	20°C [36°F]	20°C [36°F]
TCS Flow	1800 L/M [476 GPM]	2400 L/M [634 GPM]	3000 L/M [793 GPM]
TCS ΔP	-0.6 BAR [-8.7 PSI]	+1.4 BAR [+20.3 PSI]	+2.2 BAR [+32.0 PSI]
Dry Weight	3520 kg [7760 lbs]	3520 kg [7760 lbs]	3550 kg [7827 lbs]
Wet Weight	5141 kg [11333 lbs]	5141 kg [11333 lbs]	5170 kg [11400 lbs]
Noise Level at 1m [3ft]	<80 dBA		
Redundancy	Unit or System		

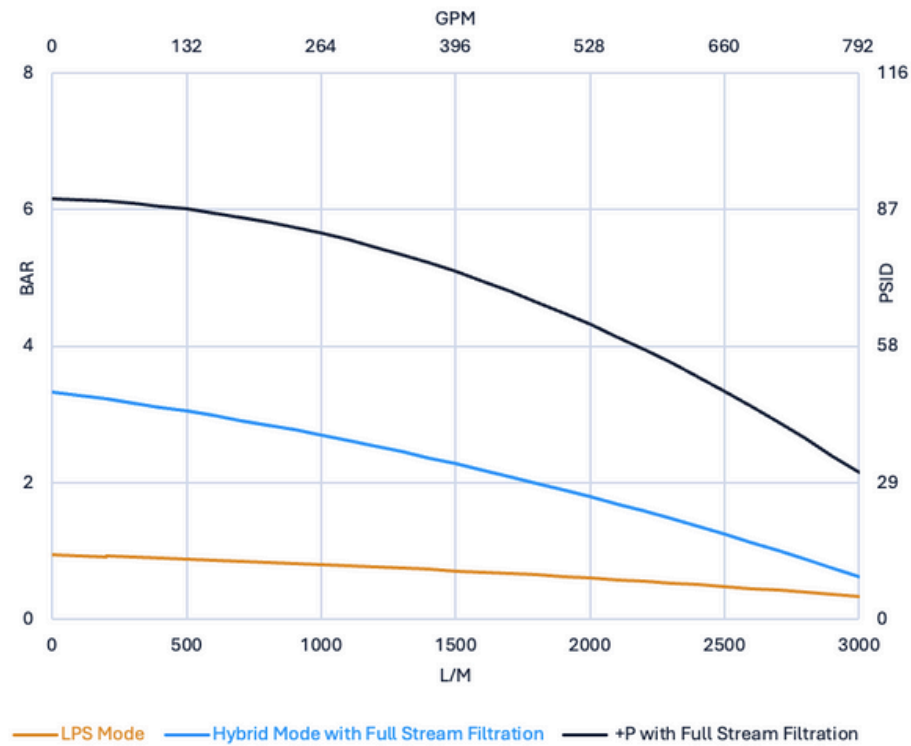
Power Supply	400V – 480V 50–60Hz, 3-phase dual feeds		
Service Amps	60A	60A	80A
Power Consumption	18 kW	30 kW	42 kW
Automatic Transfer Switch	Available		

Primary Coolant Type (FWS)	Water, Sea Water, Water-Glycol Mix [1–25%]		
Secondary Coolant Type (TCS)	Water, Water-Glycol Mix [1–25%]		
Primary Pressure Drop	0.6 BAR [8.7PSI] at 3100 L/M [819 GPM]		
Primary Connection	150mm [6 in.]		
Primary Connection Type	Sanitary [SS316]		
Secondary Connection	150mm [6 in.]		
Secondary Connection Type	Sanitary [SS316]		
Available Secondary Filtration	25μ to 50μ Full-Stream; 1μ to 25μ Side-Stream		
Integrated Degasser	Yes	Yes	Yes
System Fill Ports	1	1	1
Leak Detection	Yes	Yes	Yes

Linked System Operation	2 to 6 CDU Modules		
Communication	Modbus, OPC UA, SNMP		
HMI	Local and Remote		

¹Rated with PG25 and Full-Stream Filtration @ 25μ

EcoCore FCD vs. External Differential Pressure



ASHRAE S Class (Secondary Supply Temperature) 32C, 45C
Primary Flow Rate [GPM]

