OptiCool®

Simple. Cost-Effective. Highly Efficient.

The Next Generation in High Density Cooling

Waterless, Two-Phase, Refrigerant-Based Active Rear Door Heat Extraction from OptiCool delivers an immediate impact on capacity, efficiency, and your bottom line.

- **Reduce** your carbon footprint and energy usage by up to 90%
- **Eliminate** spatial constraints - reclaim floor and overhead space
- **Increase** rack densities up to 60kW+
- **Future-Proof Design**

  Capacity Scalability Modularity Space Efficiency Adaptability

Proven results for demanding applications

Edge Computing
High Performance Computing
Telecom and Cable
Corporate Data Center
Hot Spots
Colocations

WWW.OptiCoolTechnologies.com

CDS-30

30 kW COOL DOOR SYSTEM

Targeting and extracting heat at the source makes the OptiCool Cool Door System (CDS) the benchmark for reliable and efficient Data Center cooling.

The OptiCool CDS is an active rear door heat exchanger (RDHx) that can be mounted directly to the back of any standard equipment rack using a Door Transition Kit (DTK) that maintains the internal space of the rack. The design of the CDS provides the flexibility to install up to three Active Heat eXtractors (AHXs) per door. OptiCool's calibrated solution is engineered to maintain ambient room temperature to allow your equipment to perform as specified.

Active Heat eXtractor (AHX) units

The OptiCool AHX is a high performance, variable-speed unit that adjusts to the heat load within your equipment rack to maximize efficiency. AHX's are fed with a dual power distribution units and are placed in alignment with the heat load to extract heat from the rack. Each AHX moves air over its evaporator coils to remove the heat and provide a room-neutral temperature that minimizes the thermal impact of your equipment space. Each evaporator coil in the AHX is encased in a frame with a protective guard.

Our CDS can include blanking panels to ensure efficiency when the cooling application requires less than a full complement of AHX's per door. Additionally, clients who rely on hot aisle containment in their Data Centers can experience enhanced cooling efficiency with our AHX fan-only model. Streamlined and economical, this innovative solution optimizes white space conditions without the need for pump units or a coolant distribution network.

Specifications

# OF AHX SUPPORTED:	0 - 3
AHX DIMENSIONS (EA):	22.7 in. x 13.7 in. x 6.13 in.
AHX UNIT WEIGHT (EA):	25 lb
TOTAL DOOR DEPTH:	8.75 in. (2 in. DOOR + 6.75 in. DTK)
DOOR WEIGHT (EA):	35 lb – 57 lb
DTK WEIGHT:	24 lb – 40 lb
PDU WEIGHT:	6.5 lb
POWER INPUT:	SINGLE or DUAL
MAX POWER CONSUMPTION PER AHX:	131.5 W
INLET SENSORS:	REDUNDANT A/B TEMP SENSORS
CERTIFICATION:	ISO 9001-2015
NEBS SEISMIC COMPLIANT:	YES
COLOR:	BLACK or WHITE
DOOR HEIGHT:	42/44U – 52U 24 in. – 32 in. RACKS

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Blanking Panels are used if a full compliment of AHX's are not needed per door.
- Temperature sensors to control variable speed fans in the AHX.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- 4 Monitoring cable configuration options for multiple AHX units.
- Up to 3 AHX units can be installed per door.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

CDS-60

60 kW COOL DOOR SYSTEM

Targeting and extracting heat at the source makes the OptiCool Cool Door System (CDS) the benchmark for reliable and efficient Data Center cooling.

The OptiCool CDS is an active rear door heat exchanger (RDHx) that can be mounted directly to the back of any standard equipment rack using a Door Transition Kit (DTK) that maintains the internal space of the rack. The design of the CDS provides the flexibility to install up to three Active Heat eXtractors (AHXs) per door. OptiCool's calibrated solution is engineered to maintain ambient room temperature to allow your equipment to perform as specified.

Active Heat eXtractor (AHX) units

The OptiCool AHX is a high performance, variable-speed unit that adjusts to the heat load within your equipment rack to maximize efficiency. AHX's are fed with a dual power distribution units and are placed in alignment with the heat load to extract heat from the rack. Each AHX moves air over its evaporator coils to remove the heat and provide a room-neutral temperature that minimizes the thermal impact of your equipment space. Each evaporator coil in the AHX is encased in a frame with a protective guard.

Our CDS can include blanking panels to ensure efficiency when the cooling application requires less than a full complement of AHX's per door. Additionally, clients who rely on hot aisle containment in their Data Centers can experience enhanced cooling efficiency with our AHX fan-only model. Streamlined and economical, this innovative solution optimizes white space conditions without the need for pump units or a coolant distribution network.

Specifications

# OF AHX SUPPORTED:	0 - 3
AHX DIMENSIONS (EA):	22.7 in. x 19.5 in. x 8.25 in.
AHX UNIT WEIGHT (EA):	35 lb
TOTAL DOOR DEPTH:	8.75 in. (2 in. DOOR + 6.75 in. DTK)
DOOR WEIGHT (EA):	35 lb – 57 lb
DTK WEIGHT:	24 lb – 40 lb
PDU WEIGHT:	6.5 lb
POWER INPUT:	SINGLE or DUAL
MAX POWER CONSUMPTION PER AHX:	263 W
INLET SENSORS:	REDUNDANT A/B TEMP SENSORS
CERTIFICATION:	ISO 9001-2015
NEBS SEISMIC COMPLIANT:	YES
COLOR:	BLACK or WHITE
DOOR HEIGHT:	42/44U – 52U 24 in. – 32 in. RACKS

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

CDS-120

120 kW COOL DOOR SYSTEM

Targeting and extracting heat at the source makes the OptiCool® Cool Door System (CDS) the benchmark for reliable and efficient Data Center cooling.

The OptiCool® CDS is an active rear door heat exchanger (RDHx) that can be mounted directly to the back of any standard equipment rack using a Door Transition Kit (DTK) that maintains the internal space of the rack. OptiCool's calibrated solution is engineered to maintain ambient room temperature to allow your equipment to perform as specified.

Cool Door System (CDS) units

The OptiCool® CDS-120 is a high performance, variable-speed CDS that adjusts to the heat load within your equipment rack to maximize efficiency. The OptiCool® CDS dual-core coil design utilizes parallel refrigerant flow paths to minimize refrigerant pressure drop while maximizing cooling efficiency across the system. Engineered for optimized thermal transfer and balanced system operation, the advanced dual-core architecture supports stable thermal conditions and reliable performance in demanding data center environments.

Maintenance and serviceability have never been easier with hot-swappable fan banks and direct coil access to minimize downtime while enabling fast, efficient servicing in mission critical environments. Streamlined and economical, this innovative solution optimizes energy consumption and heat extraction capacity.

Specifications

DOOR DESCRIPTION:	1 door / 9 banks / 36 individual fans
DIMENSIONS (L x W x H):	30.00 in. x 6.00 in. x 92.00 in.
DOOR WEIGHT:	250 lbs
FAN DIAMETER:	6.70 in. x 5.90 in. (172 mm x 150 mm)
COOLING CAPACITY:	120 kW
DTK WEIGHT:	112 lbs Maximum
POWER SUPPLY RACK UTILIZATION:	32 lb / IU (2U's for 2N Redundancy)
POWER INPUT:	120 VAC
MAX POWER CONSUMPTION:	5.02 kW
NOMINAL POWER CONSUMPTION:	3.02 kW
INLET SENSORS:	8 TEMP SENSORS
OUTLET SENSORS:	9 TEMP SENSORS (1 per fan bank)
COLOR:	Black, White, or Custom
SUPPORTED RACKS:	48U – 52U / 30 in. – 32 in. RACKS

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Temperature sensors to control variable speed fans in the CDS.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Remote Monitoring capability.
- Hot-swappable fan bank modularity for easy maintenance and serviceability.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers Pkwy,
Webster, NY 14580 USA

Service 585-453-2014

RPW-060

CHILLED WATER EXTERNAL HEAT REJECTION

The OptiCool RPW-060 system provides best-in-class precision cooling in any mission-critical infrastructure where chilled water is available.

The OptiCool RPW-060 is a highly efficient low-pressure pumped R-513A refrigerant system supporting up to 40 Active Heat eXtractor (AHX) units for applications achieving 60 kW of non-condensing 100% sensible cooling. Employing a pumped R-513A solution ensures a highly reliable, oil-free, nontoxic, non-conductive, and non-corrosive sustainable cooling ecosystem to efficiently extract heat at the source.

The RPW-060 pump is part of a system and requires other OptiCool products for effective heat transfer out of the room.

The RPW-060 system uses a chilled water system for external heat rejection. This chilled water system is typically existing facility infrastructure with sufficient capacity to handle the additional load from the RPW-060 system. Alternatively, a new chilled water package may be provided by a third party.

Specifications

MIN/MAX kW CAPACITY:	5 kW / 60 kW
EXTERNAL HEAT REJECTION:	CHILLED WATER or GLYCOL MIX
NUMBER OF AHX SUPPORTED:	3 to 40 per pump
POWER OPTIONS:	480 V, 3 Phase, 60 Hz 208 V / 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	480 V, 6.5 amp 208 V / 230 V, 16 amp
PUMP DRY WEIGHT:	1,300 lb
PUMP DIMENSIONS:	30 in. x 82 in. x 40 in.
REFRIGERANT DISTRIBUTION NETWORK EQUIVALENT SUPPLY LENGTH (MAX):	185 ft.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
CERTIFICATION:	ISO 9001
CHILLED WATER FLOW RATE:	140 GPM
MAX SUPPLY PRESSURE:	100 psig
RPW CHILLED WATER DELTA AT FULL LOAD:	12°F
CHILLED WATER SUPPLY TEMP:	45°F
WATER CONNECTION SIZE:	2.5 in. NOM (2.625 in. ODF)
ALLOWABLE WATER PRESSURE DIFFERENTIAL:	15 – 75 psid

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

RPW-120

CHILLED WATER EXTERNAL HEAT REJECTION

The OptiCool RPW-120 system provides best-in-class precision cooling in any mission-critical infrastructure where chilled water is available.

The OptiCool RPW-120 is a highly efficient low-pressure pumped R-513A refrigerant system supporting up to 40 Active Heat eXtractor (AHX) units for applications achieving 120 kW of non-condensing 100% sensible cooling. Employing a pumped R-513A solution ensures a highly reliable, oil-free, nontoxic, non-conductive, and non-corrosive sustainable cooling ecosystem to efficiently extract heat at the source.

The RPW-120 pump is part of a system and requires other OptiCool products for effective heat transfer out of the room.

The RPW-120 system uses a chilled water system for external heat rejection. This chilled water system is typically existing facility infrastructure with sufficient capacity to handle the additional load from the RPW-120 system. Alternatively, a new chilled water package may be provided by a third party.

Specifications

MIN/MAX kW CAPACITY:	5 kW / 120 kW
EXTERNAL HEAT REJECTION:	CHILLED WATER or GLYCOL MIX
NUMBER OF AHX SUPPORTED:	3 to 40 per pump
POWER OPTIONS:	480 V, 3 Phase, 60 Hz 208 V / 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	480 V, 6.5 amp 208 V / 230 V, 16 amp
PUMP DRY WEIGHT:	1,300 lb
PUMP DIMENSIONS:	30 in. x 82 in. x 40 in.
REFRIGERANT DISTRIBUTION NETWORK EQUIVALENT SUPPLY LENGTH (MAX):	185 ft.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
CERTIFICATION:	ISO 9001-2015
CHILLED WATER FLOW RATE:	140 GPM
MAX SUPPLY PRESSURE:	100 psig
RPW CHILLED WATER DELTA AT FULL LOAD:	12°F
CHILLED WATER SUPPLY TEMP:	45°F
WATER CONNECTION SIZE:	2.5 in. NOM (2.625 in. ODF)
ALLOWABLE WATER PRESSURE DIFFERENTIAL:	15 – 75 psid

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers pkwy,
Webster, NY 14580 USA

Sales 585-347-6142
Service 585-967-5434

RPW-230

CHILLED WATER EXTERNAL HEAT REJECTION

The OptiCool RPW-230 system provides best-in-class precision cooling in any mission-critical infrastructure where chilled water is available.

The OptiCool RPW-230 is a highly efficient low-pressure pumped R-513A refrigerant system supporting up to 40 Active Heat eXtractor (AHX) units for applications achieving 230 kW of non-condensing 100% sensible cooling. Employing a pumped R-513A solution ensures a highly reliable, oil-free, nontoxic, non-conductive, and non-corrosive sustainable cooling ecosystem to efficiently extract heat at the source.

The RPW-230 pump is part of a system and requires other OptiCool products for effective heat transfer out of the room.

The RPW-230 system uses a chilled water system for external heat rejection. This chilled water system is typically existing facility infrastructure with sufficient capacity to handle the additional load from the RPW-230 system. Alternatively, a new chilled water package may be provided by a third party.

Specifications

MIN/MAX kW CAPACITY:	5 kW / 230 kW
EXTERNAL HEAT REJECTION:	CHILLED WATER or GLYCOL MIX
NUMBER OF AHX SUPPORTED:	3 to 40 per pump
POWER OPTIONS:	480 V, 3 Phase, 60 Hz 208 V / 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	480 V, 6.5 amp 208 V / 230 V, 16 amp
PUMP DRY WEIGHT:	1,500 lb
PUMP DIMENSIONS:	33 in. x 82 in. x 40 in.
REFRIGERANT DISTRIBUTION NETWORK EQUIVALENT SUPPLY LENGTH (MAX):	185 ft.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
CERTIFICATION:	ISO 9001-2015
CHILLED WATER FLOW RATE:	220 GPM
MAX SUPPLY PRESSURE:	100 psig
RPW CHILLED WATER DELTA AT FULL LOAD:	12°F
CHILLED WATER SUPPLY TEMP:	45°F
WATER CONNECTION SIZE:	3 in. NOM (3.125 in. ODF)
ALLOWABLE WATER PRESSURE DIFFERENTIAL:	18 – 87 psid

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers pkwy,
Webster, NY 14580 USA

Sales 585-347-6142
Service 585-967-5434

RPW-500

CHILLED WATER EXTERNAL HEAT REJECTION

The OptiCool RPW-500 system provides best-in-class precision cooling mission-critical infrastructure where chilled water is available.

The OptiCool RPW-500 is a highly efficient low-pressure pumped R-513A refrigerant system supporting high-density applications with up to 500 kW of condensation-free, 100% sensible cooling capacity. Employing a pumped R-513A solution ensures a highly reliable, oil-free, non-toxic, non-conductive, and non-corrosive sustainable cooling ecosystem designed to efficiently extract heat at the source while supporting next-generation high-performance computing and AI environments.

The RPW-500 pump is part of a fully integrated cooling ecosystem and requires other OptiCool products for effective heat transfer out of the room.

The RPW-500 system utilizes the site facility chilled water system for external heat rejection.

Specifications

EXTERNAL HEAT REJECTION:	CHILLED WATER
CHILLED WATER FLOW RATE:	410 GPM
CHILLED WATER SUPPLY TEMP:	45°F
RPW CHILLED WATER DELTA AT FULL LOAD:	8°F
MAX CHILLED WATER SUPPLY PRESSURE:	150 psig
ALLOWABLE WATER PRESSURE DIFFERENTIAL:	5.1 – 116 psid
MIN/MAX kW CAPACITY:	5 kW / 500 kW
POWER OPTIONS:	460 V, 3 Phase, 60 Hz 208 – 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	460 V – 2.65 A 208 – 230 V – 10 A
WATER CONNECTION SIZE:	5 in. NOM (5.6 in. OD)
PUMP DRY WEIGHT:	1,850 lb.
PUMP DIMENSIONS (L x W x H):	67.50 in. x 29.00 in. x 81.78 in.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers Pkwy,
Webster, NY 14580 USA
Service 585-453-2014

RPC-115

DIRECT EXPANSION (DX) EXTERNAL HEAT REJECTION

The OptiCool RPC-115 system provides best-in-class precision cooling in any mission-critical where Direct eXpansion (DX) cooling applications are required.

The OptiCool RPC-115 is a highly efficient low-pressure pumped 513a refrigerant system supporting up to 40 Active Heat eXtractor (AHX) units for applications achieving 115 kW of non-condensing 100% sensible cooling. Employing a pumped R-513a solution ensures a highly reliable, oil-free, non toxic, non-conductive, and non corrosive sustainable cooling ecosystem to efficiently extract heat at the source.

The RPW-115 pump is part of a system and requires other OptiCool products for effective heat transfer out of the room. Each RPC-115 pump also requires an Outdoor Heat eXpansion unit (ODX-115).

Specifications

MIN/MAX kW CAPACITY:	12 kW / 115 kW
EXTERNAL HEAT REJECTION:	DIRECT EXPANSION (DX) R-410A.
NUMBER OF AHX SUPPORTED:	3 to 40 per pump
POWER OPTIONS:	480 V, 3 Phase, 60 Hz 208 V / 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	480 V, 6.5 amp 208 V / 230 V, 16 amp
PUMP DRY WEIGHT:	1,300 lb
PUMP DIMENSIONS:	30 in. x 82 in. x 40 in.
REFRIGERANT DISTRIBUTION NETWORK EQUIVALENT SUPPLY LENGTH (MAX):	185 ft.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
CERTIFICATION:	ISO 9001-2015

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

ODX-115

OUTDOOR DIRECT EXPANSION (ODX)

The OptiCool ODX-115 unit pairs with a single OptiCool RPC-115 pump to create a high quality system that provides precision cooling in any mission critical infrastructure where Direct eXpansion (DX) cooling applications are required.

The OptiCool ODX-115 unit manages the transfer of heat from the RPC-115 pump to the outdoors using R-410A refrigerant. The unit has variable capacity compressors, which allow for low and fluctuating heat loads. The ODX-115 unit is air-cooled condenser that can be roof or ground-mounted.

The ODX-115 unit is part of a system and requires other OptiCool products for effective heat transfer out of the room. Each ODX-115 unit also requires an OptiCool RPC-115 pump.

Specifications

ODX POWER CONSUMPTION:**	41 kW
ODX WEIGHT:	1,800 lb
ODX DIMENSIONS:	45 in. x 98 in. x 100 in.
COMPRESSORS (BLDC SCROLL):	2
AMBIENT OPERATING RANGE:	-40°F – 120°F
MINIMUM LOAD REQUIRED*:**	12 kW
ODX/RPC EQUIVALENT SUPPLY LENGTH (MAX)*:**	185 ft
SECONDARY CIRCUIT REFRIGERANT:	R-410A
MAX POWER CONSUMPTION PER AHX:	131.5 W
MCA:	480 V, 3 Phase, 75 amp 208 V / 230 V, 3 Phase, 165 amp
MOPD:	480 V, 3 Phase, 100 amp 208 V / 230 V, 3 Phase, 225 amp
CERTIFICATION:	ISO 9001

***100% @ Rated Condition of 95°F*

****Minimum load may vary with line length and elevation*

Features

- Assembled in the USA.
- Integrated communication with RPC for data monitoring.
- Aesthetic design and light-weight with compact outdoor footprint.
- Redundant capable with multiple compressors.
- Variable speed compressors for precise temperature control and minimal power consumption.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers pkwy,
Webster, NY 14580 USA

Sales 585-347-6142
Service 585-967-5434

RPC-230

DIRECT EXPANSION (DX) EXTERNAL HEAT REJECTION

The OptiCool RPC-230 system provides best-in-class precision cooling in any mission-critical where Direct eXpansion (DX) cooling applications are required.

The OptiCool RPC-230 is a highly efficient low-pressure pumped R-513A refrigerant system supporting up to 40 Active Heat eXtractor (AHX) units for applications achieving 230 kW of non-condensing 100% sensible cooling. Employing a pumped R-513A solution ensures a highly reliable, oil-free, non toxic, non-conductive, and non corrosive sustainable cooling ecosystem to efficiently extract heat at the source.

The RPW-230 pump is part of a system and requires other OptiCool products for effective heat transfer out of the room. Each RPC-230 pump also requires an Outdoor Heat eXpansion unit (ODX-230).

Specifications

MIN/MAX kW CAPACITY:	22 kW / 230 kW
EXTERNAL HEAT REJECTION:	DIRECT EXPANSION (DX) R-410A.
NUMBER OF AHX SUPPORTED:	3 to 40 per pump
POWER OPTIONS:	480 V, 3 Phase, 60 Hz 208 V / 230 V, 1 Phase, 60 Hz
FULL LOAD AMPS:	480 V, 6.5 amp 208 V / 230 V, 16 amp
PUMP DRY WEIGHT:	1,500 lb
PUMP DIMENSIONS:	33 in. x 82 in. x 40 in.
REFRIGERANT DISTRIBUTION NETWORK EQUIVALENT SUPPLY LENGTH (MAX):	185 ft.
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
CERTIFICATION:	ISO 9001-2015

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Aesthetic design with flexible location and compact footprint.
- Energy efficient redundant pump motor and VFD with automatic changeover.
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

ODX-230

OUTDOOR DIRECT EXPANSION (ODX)

The OptiCool ODX-230 unit pairs with a single OptiCool RPC-230 pump to create a high quality system that provides precision cooling in any mission critical infrastructure where Direct eXpansion (DX) cooling applications are required.

The OptiCool ODX-230 unit manages the transfer of heat from the RPC-230 pump to the outdoors using R-410A refrigerant. The unit has variable capacity compressors, which allow for low and fluctuating heat loads. The ODX-230 unit is air-cooled condenser that can be roof or ground-mounted.

The ODX-230 unit is part of a system and requires other OptiCool products for effective heat transfer out of the room. Each ODX-230 unit also requires an OptiCool RPC-230 pump.

Specifications

ODX POWER CONSUMPTION:**	82 kW
ODX WEIGHT:	3,600 lb
ODX DIMENSIONS:	90 in. x 98 in. x 101 in.
COMPRESSORS (BLDC SCROLL):	4
AMBIENT OPERATING RANGE:	-40°F to 120°F
MINIMUM LOAD REQUIRED*:**	22 kW
ODX/RPC EQUIVALENT SUPPLY LENGTH (MAX)*:**	185 ft
SECONDARY CIRCUIT REFRIGERANT:	R-410A
MAX POWER CONSUMPTION PER AHX:	131.5 W
MCA:	480 V, 3 Phase, 139 amp 208 V / 230 V, 3 Phase, 313 amp
MOPD:	480 V, 3 Phase, 150 amp 208 V / 230 V, 3 Phase, 350 amp
CERTIFICATION:	ISSO 9001

***100% @ Rated Condition of 95°F*

****Minimum load may vary with line length and elevation*

Features

- Assembled in the USA.
- Integrated communication with RPC for data monitoring.
- Aesthetic design and light-weight with compact outdoor footprint.
- Redundant capable with multiple compressors.
- Variable speed compressors for precise temperature control and minimal power consumption.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers pkwy,
Webster, NY 14580 USA

Sales 585-347-6142
Service 585-967-5434

CDU-M15

COOL DISTRIBUTION UNIT

OptiCool Coolant Distribution Units: Liquid Cooling for AI High-Performance Computing

OptiCool's Coolant Distribution Units (CDU) are purpose-built to decouple facility chilled water systems from IT cooling infrastructure, delivering precision liquid cooling solutions for high-density, AI driven Data Centers.

OptiCool's 1.5 MW CDU ensures efficient heat removal, while supporting seamless integration into any Data Center environment.

With Customizable configurations and precision control systems, OptiCool's CDU's provide scalable, resilient cooling that meets todays demands, while future-proofing your Data Center for tomorrow's capacity needs.

Whether supporting direct-to-chip cooling, rear door heat exchangers, or next generation IT workloads, OptiCool CDU's are the ultimate solution for optimizing your Data Centers performance and efficiency.

Specifications

EXTERNAL HEAT REJECTION:	CHILLED WATER OR GLYCOL MIX
NORMAL CAPACITY:	1,500 Kw @ 6.5°F ATD
MAX SECONDARY FLOW:	440 GPM
MAX SECONDARY EXTERNAL PRESSURE DROP:	65 PSI
SECONDARY TEMPERATURE RANGE:	45° to 130°F
PRIMARY INTERNAL PRESSURE DROP:	13 PSI @ 320 GPM
MAX POWER CONSUMPTION:	17.2 kW
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
DIMENSIONS:	66 in. x 79 in. x 39 in.

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Redundant and Autonomous Operation.
- Optional, internal Dual Power Feed (ATS).
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580 USA
Sales 585-347-6142
Service 585-967-5434

CDU-M15-600

COOLANT DISTRIBUTION UNIT

OptiCool Coolant Distribution Units: Liquid Cooling for AI High-Performance Computing

The CDU-M15-600 is a high-flow coolant distribution unit engineered to support large-scale liquid cooling deployments for AI and high-performance computing environments. Designed with up to 630 GPM secondary loop capacity, the platform supports liquid cooling architectures requiring flow rates up to approximately 1.5 LPM per kW across high-density IT infrastructure while providing hydraulic separation between the facility water system and the technology cooling loop.

The system supports deployment flexibility across direct-to-chip and rear door heat exchanger architectures, with redundant operation, precision flow control, and industry-standard BMS integration for scalable liquid cooling infrastructure.

With Customizable configurations and precision controls, OptiCool's CDUs provide scalable, resilient cooling that meets today's demands, while future-proofing your Data Center for tomorrow's capacity needs.

Specifications

EXTERNAL HEAT REJECTION:	CHILLED WATER OR GLYCOL MIX
MAX CAPACITY:	1.5 MW @ 25°F ATD
MAX SECONDARY FLOW:	630 GPM / 1.5 LPM / kW
POWER:	460 VAC / 3 Phase / 60 Hz
MIN CIRCUIT AMPACITY (MCA):	70 A
MAX OVERCURRENT PROTECTION (MOCP):	150 A
MAX POWER CONSUMPTION:	38 kW
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
MAX SUPPLY PRESSURE:	100 PSI
MAX EXTERNAL PRESSURE DROP:	65 PSI
WATER TEMPERATURE RANGE:	45° to 130°F
PRIMARY INTERNAL PRESSURE DROP:	13 PSI @ 468 GPM
PRIMARY LOOP WATER CONNECT SIZE:	4 in. NOM SCH 10
SECONDARY LOOP WATER CONNECT SIZE:	4 in. NOM SCH 10
PRIMARY LOOP ALLOWABLE PRESSURE DIFFERENTIAL:	5-87 PSID
DIMENSIONS (L x W x H):	100.60 in. x 36.70 in. x 79.00 in.
Dry Weight	4,000 lbs. (Approx)

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Redundant and Autonomous Operation.
- Optional, Internal Dual Power Feed (ATS).
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.
- Optional 3-position internal mixing valve for precise return water temperature control.
- Hot-swappable pump modularity for easy maintenance and serviceability.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers Pkwy,
Webster, NY 14580 USA

Service 585-453-2014

CDU-M30-1200

COOLANT DISTRIBUTION UNIT

OptiCool Coolant Distribution Units: Liquid Cooling for AI High-Performance Computing

The CDU-M30-1200 is a high-flow coolant distribution unit engineered to support large-scale liquid cooling deployments for AI and high-performance computing environments. Designed with up to 1220 GPM secondary loop capacity, the platform supports liquid cooling architectures requiring flow rates up to approximately 1.5 LPM per kW across high-density IT infrastructure while decoupling facility water systems from critical IT cooling networks.

The system supports deployment flexibility across direct-to-chip and rear door heat exchanger architectures, with redundant operation, precision flow control, and industry-standard BMS integration for scalable liquid cooling infrastructure.

With Customizable configurations and precision control systems, OptiCool's CDUs provide scalable, resilient cooling that meets today's demands, while future-proofing your Data Center for tomorrow's capacity needs.

Specifications

EXTERNAL HEAT REJECTION:	CHILLED WATER OR GLYCOL MIX
MAX CAPACITY:	3.0 MW @ 25°F ATD
MAX SECONDARY FLOW:	1220 GPM / 1.5 LPM / kW
POWER:	460 VAC / 3 Phase / 60 Hz
MIN CIRCUIT AMPACITY (MCA):	140 A
MAX OVERCURRENT PROTECTION (MOCP):	200 A
MAX POWER CONSUMPTION:	57 kW
COMMUNICATION / MONITORING:	MODBUS, BACNET, or SNMP
MAX SUPPLY PRESSURE:	100 PSI
MAX EXTERNAL PRESSURE DROP:	65 PSI
WATER TEMPERATURE RANGE:	45° to 130°F
PRIMARY INTERNAL PRESSURE DROP:	13 PSI @ 936 GPM
PRIMARY LOOP WATER CONNECT SIZE:	8 in. NOM SCH 10
SECONDARY LOOP WATER CONNECT SIZE:	8 in. NOM SCH 10
PRIMARY LOOP ALLOWABLE PRESSURE DIFFERENTIAL:	5-87 PSID
DIMENSIONS (LxWxH):	125.00 in. x 56.00 in. x 100.00 in
Dry Weight	5,315 lbs. (Approx)

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Redundant and Autonomous Operation.
- Optional, Internal Dual Power Feed (ATS).
- System designed with cooling capacity management to efficiently handle load change fluctuations.
- Intuitive 10-inch touchscreen controls.
- Dynamic self-balancing pressure independent flow control valve for precise capacity control.
- Optional 3-position internal mixing valve for precise return water temperature control.
- Hot-swappable pump modularity for easy maintenance and serviceability.

Opticooltechnologies.com
Info@opticooltech.com

855 Publishers Pkwy,
Webster, NY 14580 USA

Service 585-453-2014

AISLE CONTAINMENT

OptiCool's™ AHX-Integrated Aisle Containment solution combines the efficiency of active cooling with the scalability and familiarity of traditional aisle containment systems. By integrating our intelligent Active Heat Exchange (AHX) units directly into the containment structure, we provide a modular, high-performance solution designed to meet the demands of today's densifying data centers.

Whether you're retrofitting an existing environment or designing a new build, this solution delivers rack-level cooling without the complexity of full-room HVAC upgrades. The AHX units dynamically adjust based on real-time heat loads, extracting heat directly at the source and discharging room-neutral air, preserving aisle separation while eliminating thermal hotspots.

Designed for deployment with OptiCool's™ overhead manifold and Refrigeration Distribution Network (RDN), this system enables fast, efficient installation and scaling across a variety of environments.

Specifications

RACK HEIGH:	42U,45U,48U OR CUSTOM SIZES
AISLE WIDTH:	3-6 ft FOR ACCESSIBILITY
RACK DEPTH:	STANDARD 42-48 in.
HEAT DISSIPATION CAPACITY:	5-40 kW PER RACK
AHX OPTIONS:	10 kW, 20kW, 40 kW
AHX DIMENSIONS:	10 kW: 22.7 in. x 13.7 in. x 6.13 in. 20 kW: 22.7 in. x 19.5 in. x 8.25 in. 40 kW: 22.7 in. x 19.5 in. x 9.00 in.
REFRIGERANT COOLING:	R-513A
ENERGY EFFICIENCY:	1.02 PUE
POWER INPUT:	SINGLE or DUAL
MAX POWER CONSUMPTION PER AHX:	131.5 W for 10 kW AHX 263 W for 20 kW AHX 1.278 kW for 40 kW AHX
INLET SENSORS:	REDUNDANT A/B TEMP SENSORS

Features

- Assembled in the USA.
- Industry standard hardware and software for easy BMS integration.
- Compatible with existing infrastructure Greenfield/Brownfield.
- Eliminates mixing of hot and cold air, ensuring uniform, predictable temperature to all IT equipment.
- Variable-speed fans adjust to actual workload demand.
- Cooling Cost Reduction: Can lower cooling energy consumption.
- Hot-swappable AHX units adapt to increasing rack loads.

Opticooltechnologies.com
Info@opticooltech.com
855 Publishers pkwy,
Webster, NY 14580
Sales 585-347-6142
Service 585-967-5434

RPW System Solution - Equipment and Services

RPW Units are connected to facility chilled water, and can be installed up to 185' away from last RDS header port.

*RPW Supplied by OptiCool, Installed by Certified OptiCool mechanical contractor.

*All fittings to connect the RPW to the facility chilled water and RDS sections to be supplied by Mechanical Contractor.

*Electric connections to the RPW supplied by mechanical contractor.

*BMS- supports MODBUS,BACNET, or SNMP

RDS- (Refrigerant Distribution Section)- each pair of headers can support (5) 24" cabinets, (4) 30" cabinets, or (3) 32" cabinets.
*RDS Supplied by OptiCool, Installed by Certified OptiCool mechanical contractor.

*All fittings to connect the RDS to the RPW, including bypass assembly and filter assembly to be supplied by Mechanical Contractor.

EXAMPLE: Customer has (20) 24" cabinets, they would need 4 pairs of the RDS sections.

CDS-(Cool Door System) and DTK-(Door Transition Kit) are mounted to the back of the customers cabinet and can support up to 3 AHX units per door. Blanking panels can be used when the cooling application requires less than a full complement of AHS's per door. DTK's can be engineered to fit any cabinet.

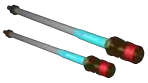
*CDS, DTK's and Blanking panels, hardware to mount DTK and CDS supplied by OptiCool.

*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

AHX-(Adaptive Heat eXtractor) - Up to 3 AHX's can be installed per door. (3) 10kW AHX's= 30kW per door or (3) 20kW AHX's =60kW per door. Total quantity of AHX's is dependent on what RPW is used.
EXAMPLE- RPW/230 can support up to (23) 10Kw AHX's or (11) 20kW AHX's.

*AHX's supplied by OptiCool

*AHX's installed by OptiCool technician or Certified OptiCool mechanical contractor.



HPS-(Hose Pair, Stainless Steel or HPI-(Hose Pair, Isolator)- (1) pair of Hoses is needed for each AHX, and is connected to the RDS by self sealing quick connect couplers (supplied by OptiCool).

*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

PDU-(Power Distribution Unit)- 4A, 400 Watts, option: AC or DC.
(2) PDU's needed for 30kW door, or (4) PDU's for 60kW door. Each PDU is mounted in the CDS or DTK.

*Supplied by OptiCool

*Electric connections supplied by mechanical contractor.

*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

SERVICES:
* OptiCool Professional Services- CDS,AHX,PDU, and HPS installation- Quote provided by OptiCool

* OptiCool Professional Services- System start up- validate refrigerant levels, establish set point parameters, calibrate dew point sensors, establish BMS connectivity and operations site personnel training. Quote provided by OptiCool.

* System Commissioning- Optional service if requested by Customer, and can be done by OptiCool or 3rd party.

* Project Management- Includes Application and Design, Site visits and engineering. Quote provided by OptiCool.

1 YEAR OPTICOOL WARRANTY INCLUDED WITH PURCHASE (PARTS ONLY, LABOR NOT INCLUDED)

5 YEAR OPTICOOL WARRANTY (PARTS ONLY, LABOR NOT INCLUDED) OPTIONAL

RPC System Solution - Equipment and Services

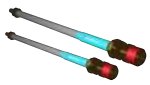
RPC Units can be installed up to 185' away from OptiCool ODX units, and can be installed up to 185' away from last RDS header port.
*RPC Supplied by OptiCool, Installed by Certified OptiCool mechanical contractor.
*All fittings to connect the RPC to the ODX and RDS sections to be supplied by Mechanical Contractor.
*Electric connections to the RPC supplied by mechanical contractor.
*BMS- supports MODBUS,BACNET, or SNMP

ODX- (Optimizer Direct Expansion)- The ODX units are paired with OptiCool pumps when facility chilled water is not available.
*ODX supplied by OptiCool.
*Installation,electric,piping and fittings supplied by mechanical contractor

RDS- (Refrigerant Distribution Section)- each pair of headers can support (5) 24" cabinets, (4) 30" cabinets, or (3) 32" cabinets.
*RDS Supplied by OptiCool, Installed by Certified OptiCool mechanical contractor.
*All fittings to connect the RDS to the RPC, including bypass assembly and filter assembly to be supplied by Mechanical Contractor.
EXAMPLE: Customer has (20) 24" cabinets, they would need 4 pairs of the RDS sections.

CDS-(Cool Door System) and DTK-(Door Transition Kit) are mounted to the back of the customers cabinet and can support up to 3 AHX units per door. Blanking panels can be used when the cooling application requires less than a full complement of AHS's per door. DTK's can be engineered to fit any cabinet.
*CDS, DTK's and Blanking panels, hardware to mount DTK and CDS supplied by OptiCool.
*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

AHX-(Adaptive Heat eXtractor) - Up to 3 AHX's can be installed per door. (3) 10kW AHX's= 30kW per door or (3) 20kW AHX's =60kW per door. Total quantity of AHX's is dependent on what RPC is used.
EXAMPLE- RPC/230 can support up to (23) 10Kw AHX's or (11) 20kW AHX's.
*AHX's supplied by OptiCool
*AHX's installed by OptiCool technician or Certified OptiCool mechanical contractor.



HPS-(Hose Pair, Stainless Steel or HPI-(Hose Pair, Isolator)- (1) pair of Hoses is needed for each AHX, and is connected to the RDS by self sealing quick connect couplers (supplied by OptiCool).
*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

PDU-(Power Distribution Unit)- 4A, 400 Watts, option: AC or DC.
(2) PDU's needed for 30kW door, or (4) PDU's for 60kW door. Each PDU is mounted in the CDS or DTK.
*Supplied by OptiCool
*Electric connections supplied by mechanical contractor.
*Installed by OptiCool technician or Certified OptiCool mechanical contractor.

SERVICES:
* OptiCool Professional Services- CDS,AHX,PDU, and HPS installation- Quote provided by OptiCool

* OptiCool Professional Services- System start up- validate refrigerant levels, establish set point parameters, calibrate dew point sensors, establish BMS connectivity and operations site personnel training. Quote provided by OptiCool.

* System Commissioning- Optional service if requested by Customer, and can be done by OptiCool or 3rd party.

* Project Management- Includes Application and Design, Site visits and engineering. Quote provided by OptiCool.

1 YEAR OPTICOOL WARRANTY INCLUDED WITH PURCHASE (PARTS ONLY, LABOR NOT INCLUDED)

5 YEAR OPTICOOL WARRANTY (PARTS ONLY, LABOR NOT INCLUDED) OPTIONAL