



We connect and protect

RDHX PRO



[nVent.com/Data Solution](http://nVent.com/DataSolution)

RDHX PRO

Smart Precision Cooling



Max
78 kW at 14°C



APPLICATION

RDHX PRO chilled water cooling units are designed to deliver localized and energy-efficient cooling in data centers, featuring toolless, hot-swappable components for maximum uptime and serviceability creating longer lifetime and ensuring customer productivity. Designed for HPC and warm water cooling, it allows free cooling under certain ambient temperatures, throughout the year.

FEATURES

- Supports 3rd party racks
- Cooling Capacity (800 W version)
 - 78 kW@ supply water 14°C, and air supply 24°C (Active 800 mm)
 - 44 kW@ supply water 24°C, and air supply 27°C (Active 800 mm)
- Size:
 - 600 W and 800 W, 42 U and 47 U, other size upon request
 - Total depth of device 281 mm (Active, incl. fans), 241 mm (Passive)
- Door opening angle > 90 degrees with integrated door stop
- Air temperature, air humidity, water temperature, water flow, water pressure sensors (optional)
- Leak detection sensors built-in (optional)
- Toolless, hot-swappable fans, PSUs and main controller, no opening of door required
- 7" touch panel display with new User Interface
- Connectivity: Ethernet, Web Interface, SNMP v3, Modbus TCP and RTU, Redfish
- Integrated condensate pump (optional, only needed when topfeed)

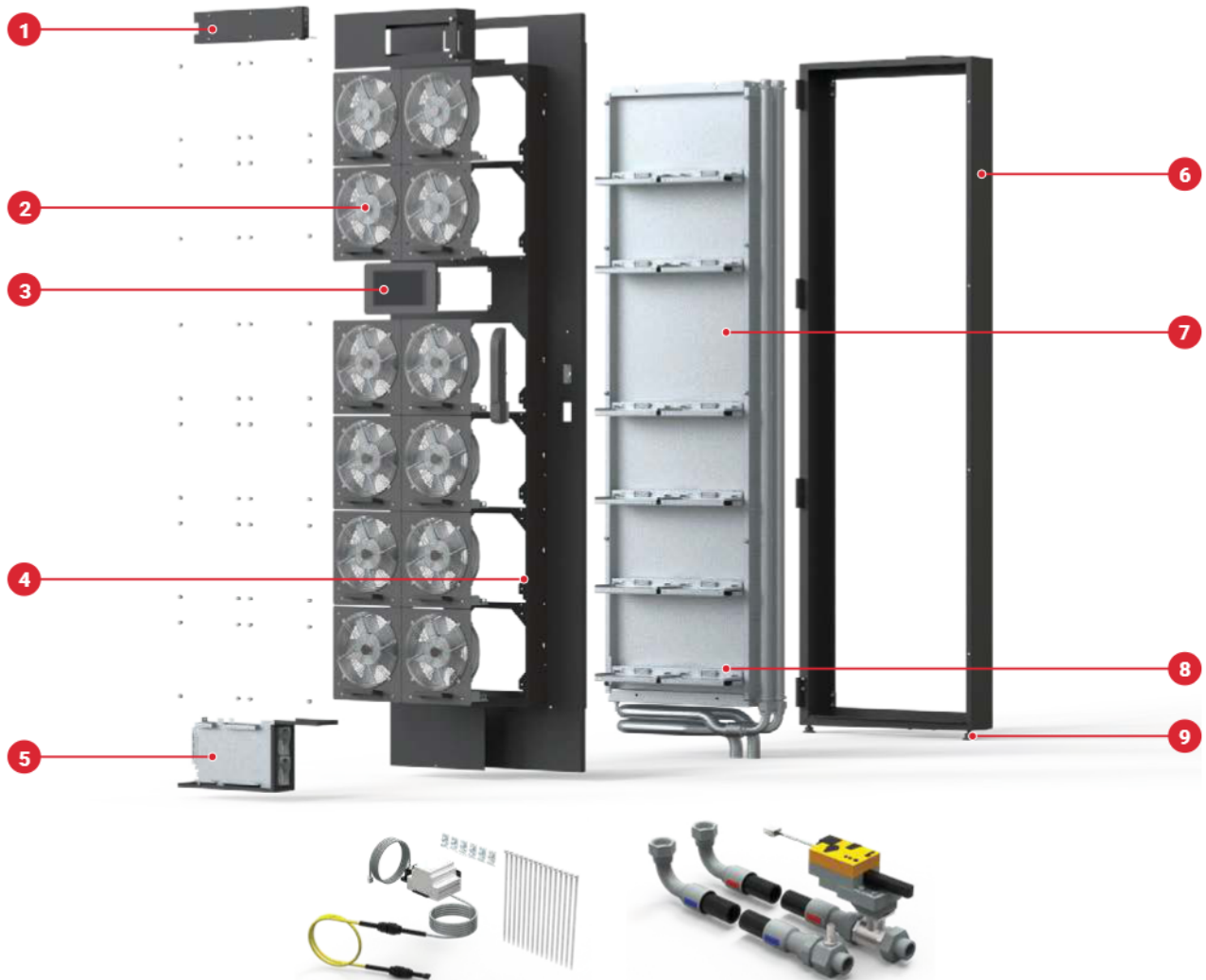
BENEFITS

- High cooling performance
- Long uptime and low maintenance costs
- Maximum availability and quick repair
- Designed for efficient operation at increased facility water temperatures
- Combination with direct-to-chip liquid cooling
- Advanced controller
- Modular standard easy to adapt to individual requirements
- No need to open the door while servicing fans screws cannot be dropped or lost on the data center floor as they are attached to the module

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PRODUCT STRUCTURE



Standard Offering	RackChiller RDHX PRO Active	RackChiller RDHX PRO Passive
Controller Swap	✓	✓
Hot-swappable Fans (Active)	✓ 12 smart fan modules with integrated sensors	x
7" Touch Panel Display	✓	✓
Rear Door	✓	✓
Power Supplies	✓ Up to 2	✓ Up to 2
Adapter Frame	✓	✓
Air-to-water Heat Exchanger	✓	✓
Sensor	✓ 2xSupply Air Temperature, 1xAir Differential Pressure	✓ 2xSupply Air Temperature, 1xAir Differential Pressure
Leveling Feet	✓	✓
Return Air Filter	Accessory	Accessory
Hose Package	Optional	Optional
Condensate Management Package	Optional	Optional
Door Switch Package	Optional	Optional
External Temp Sensor	Optional	Optional
Leak Detection	Optional	Optional
Water Sensor	Optional, please order corresponding hose package	Optional, please order corresponding hose package

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Performance	RDHX PRO Active	RDHX PRO Passive
Power Input	195–277 V _{AC} , 50/60 Hz	195–277 V _{AC} , 50/60 Hz
Max. Input	9.9 A	–
Power Consumption [W]	1800	–
Fans	12	NA
Air Flow [m³/h]/[CFM] 800 W	10.000/5882	3600/2118
Air Flow [m³/h]/[CFM] 600 W	8000/4700	2700/1588
Water Flow [m³/h]	6.0	6.0
Water pressure drop (at full flow) [kPa]	200	200
Performance (14°C water sup., 24°C air sup.) [kW] 800 W	78	38
Performance (24°C water sup., 27°C air sup.) [kW] 800 W	44	34

Features	RDHX PRO Active	RDHX PRO Passive
Standard Color	RAL 7021	RAL 7021
Dual/Redundant PSU	Optional	Optional
PSU Swap	Hot-swappable without tools, access from aisle	Hot-swappable without tools, access from aisle
Controller Swap	Hot-swappable without tools, access from aisle	Hot-swappable without tools, access from aisle
Fan Swap	12 smart fan modules with integrated sensors and fallback control, hot-swappable without tools, access from aisle	NA
Fan Control	Manual or automatic	NA
Air Humidity Sensors	12 (1 in each fan module)	NA
Communication Interfaces	RS485, Ethernet, 2 digital inputs, 3 relay outputs	RS485, Ethernet, 2 digital inputs, 3 relay outputs
Communication Protocols	Ethernet, Web Interface, SNMP, Modbus TCP, RTU, Redfish	Ethernet, Web Interface, SNMP, Modbus TCP, RTU, Redfish
Local interface/HMI	7" Touch Panel Display	7" Touch Panel Display
Operating Temperature	5–50°C/41–122°F	5–50°C/41–122°F
Transport and Storage Temperature	–40–85°C/–40–185°F	–40–85°C/–40–185°F
Normal Operating Pressure	5 bar/74 psi	5 bar/74 psi
Minimum Burst Pressure	20 bar/290 psi	20 bar/290 psi
Coolant	Feed egress for flexible hoses through cutouts at top or bottom panel	Feed egress for flexible hoses through cutouts at top or bottom panel
Coolant Flange at Device	Male BSPP 1" flat gasket (ISO 228 1) threaded flange	Male BSPP 1" flat gasket (ISO 228 1) threaded flange
Valve Control	Manual or automatic	Manual or automatic
Valve Type	2-Way (Optional)	2-Way (Optional)

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Coolant Requirements	
pH	7 to 9
Corrosion inhibitor(s)	Required, as of ASHRAE TC 9.9
Biocide	–
Sulfides	<10 ppm
Sulfate	<100 ppm
Chloride	<50 ppm
Bacteria	<1000 CFU/mL
Total hardness (as CaCO ₃)	<200 ppm
Conductivity	–
Total Suspended Solids	–
Residue after evaporation	<500 ppm
Turbidity	<20 NTU (nephelometric)
Glycol (Propylene Glycol) Concentration	≤35%

*Water quality requirements must be maintained to avoid problems during operation.

Usage of appropriate anti-corrosion and frost protection agents is recommended.

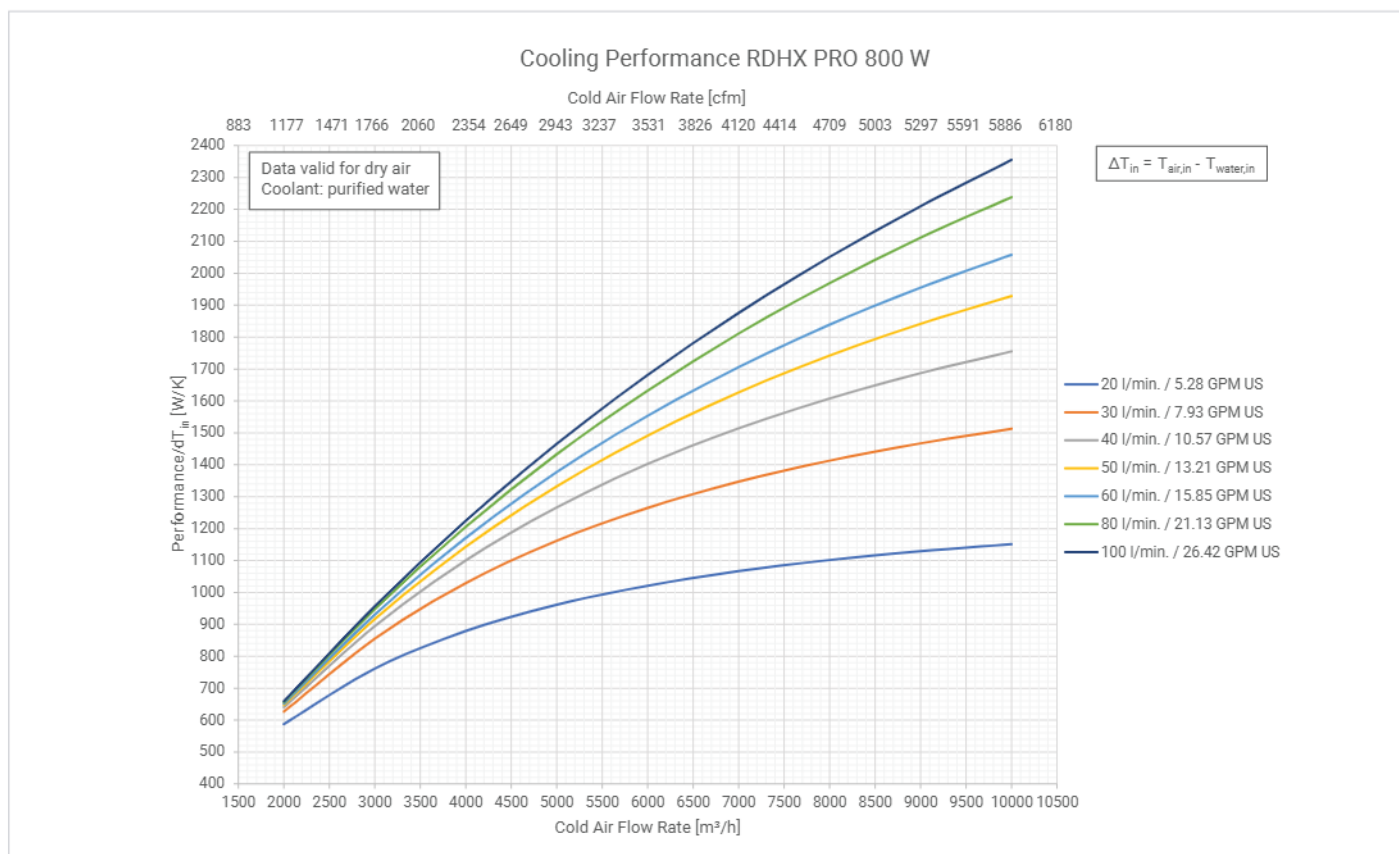
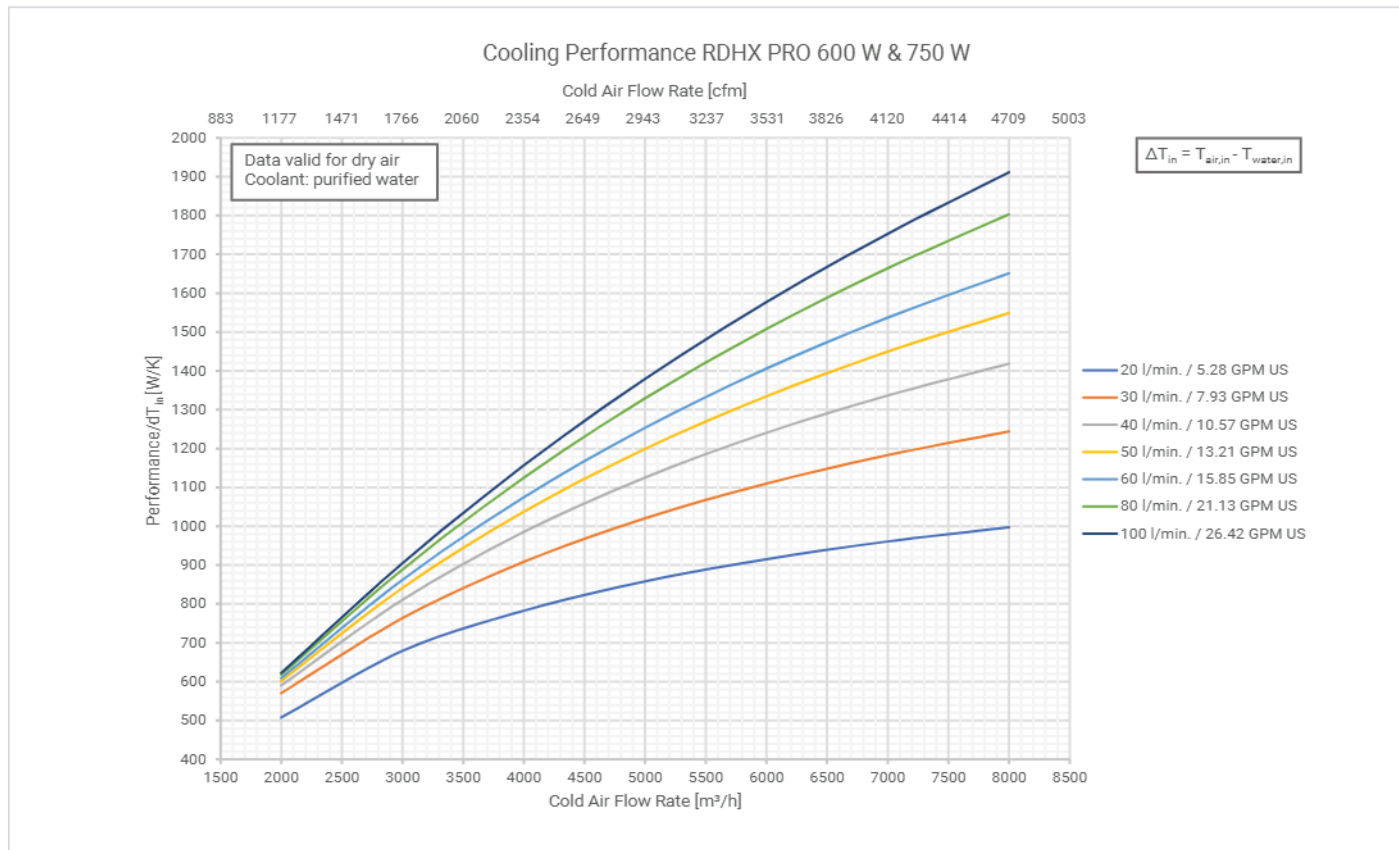
**Below 14°C/5°F there is an increased risk of condensation.

A condensate management package is recommended.

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TECHNICAL DATA

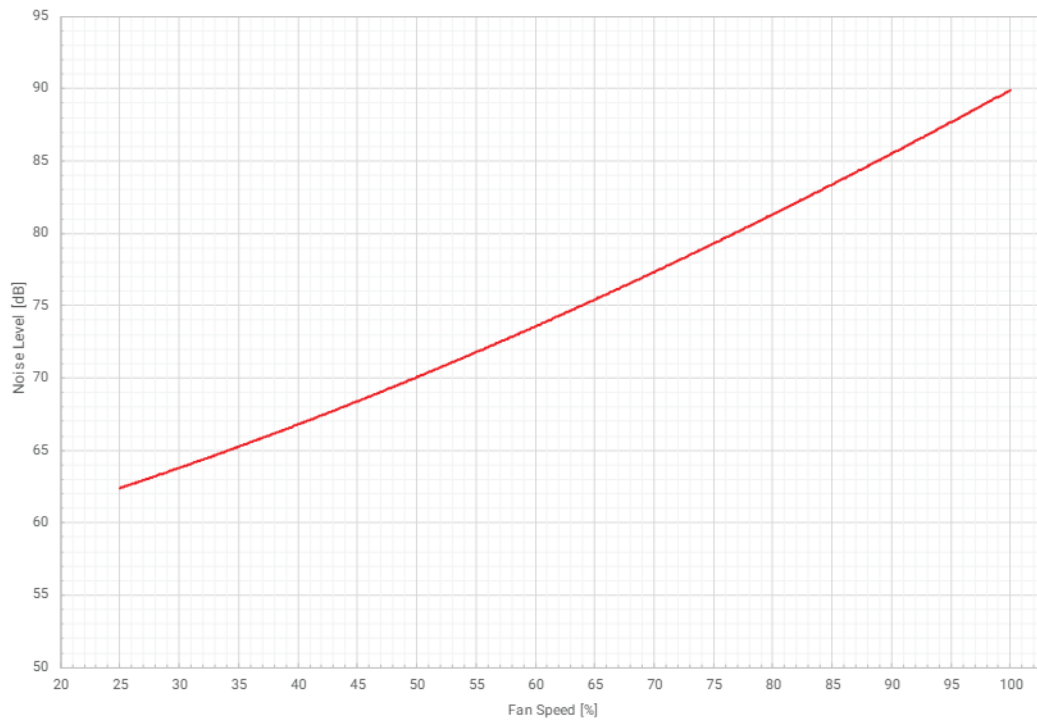


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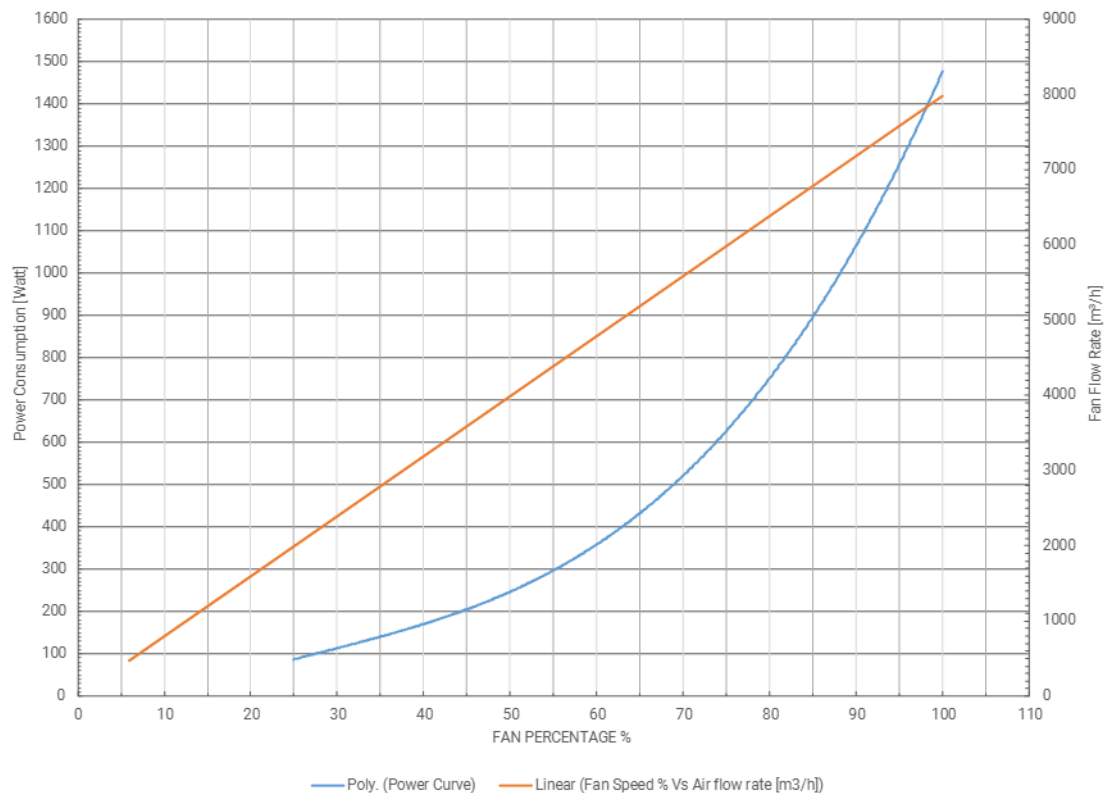
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TECHNICAL DATA

RDHX Pro: Noise Level Curve



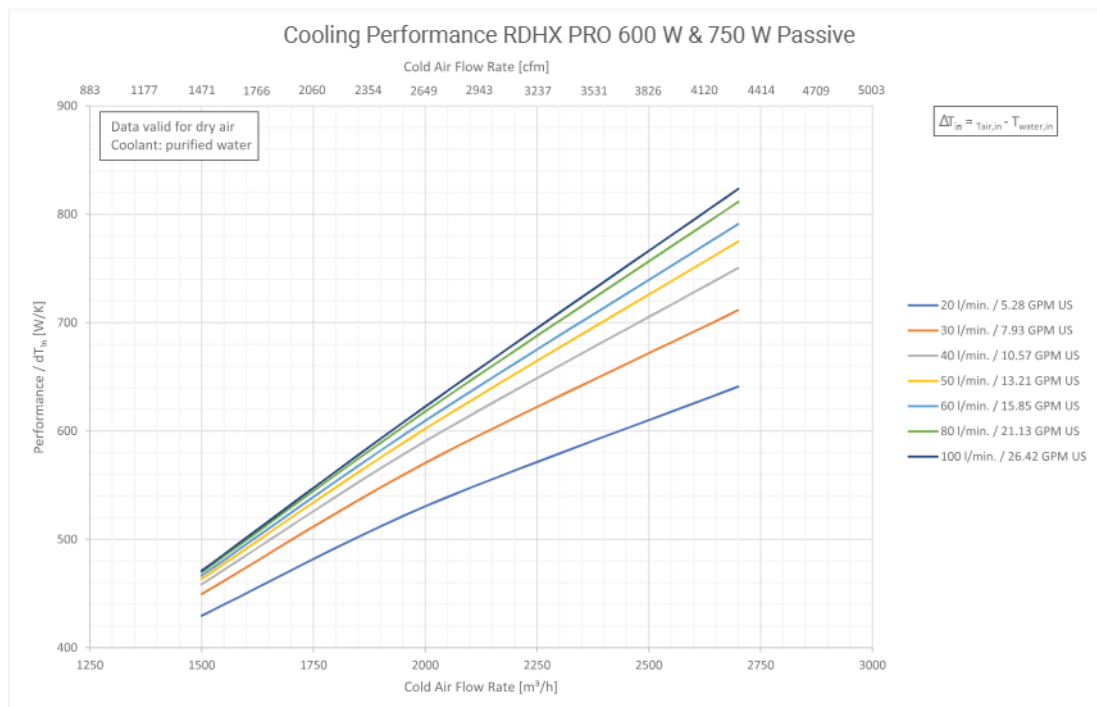
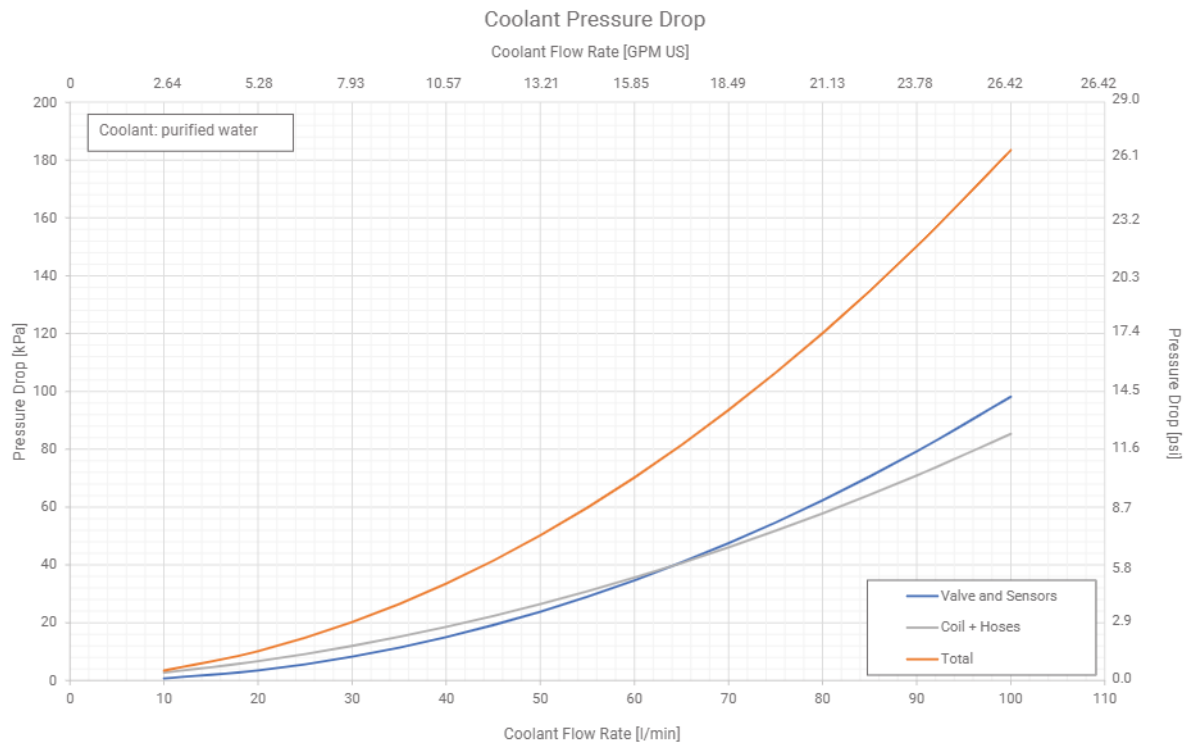
RDHX Pro: Fans Performance Curve



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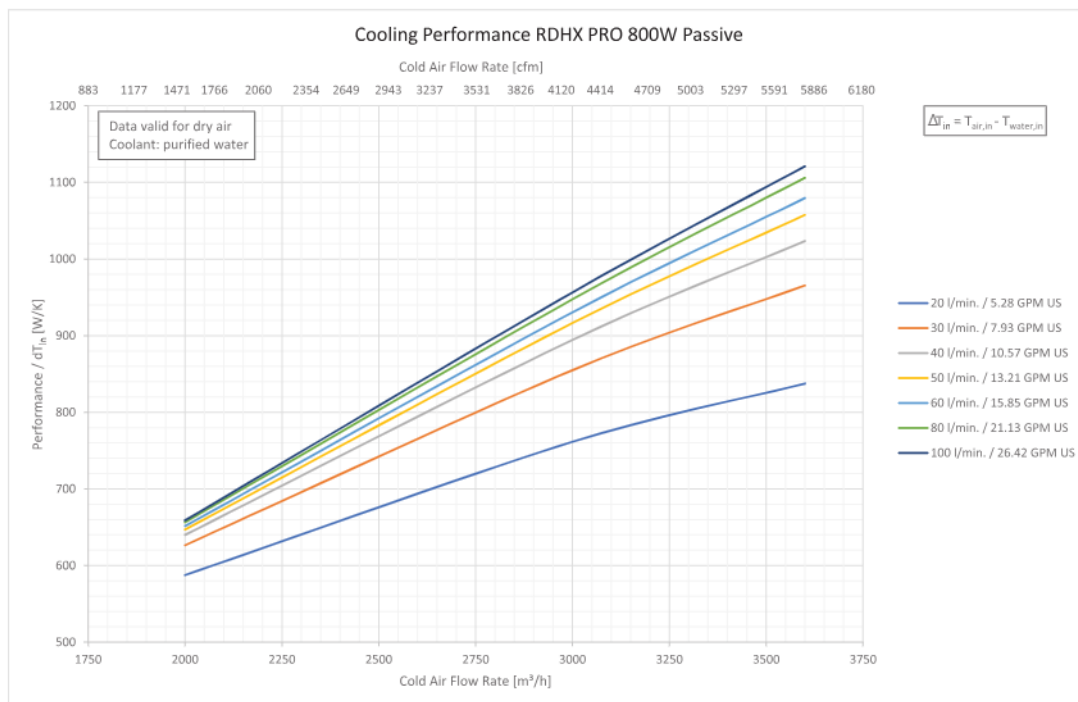
TECHNICAL DATA



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TECHNICAL DATA

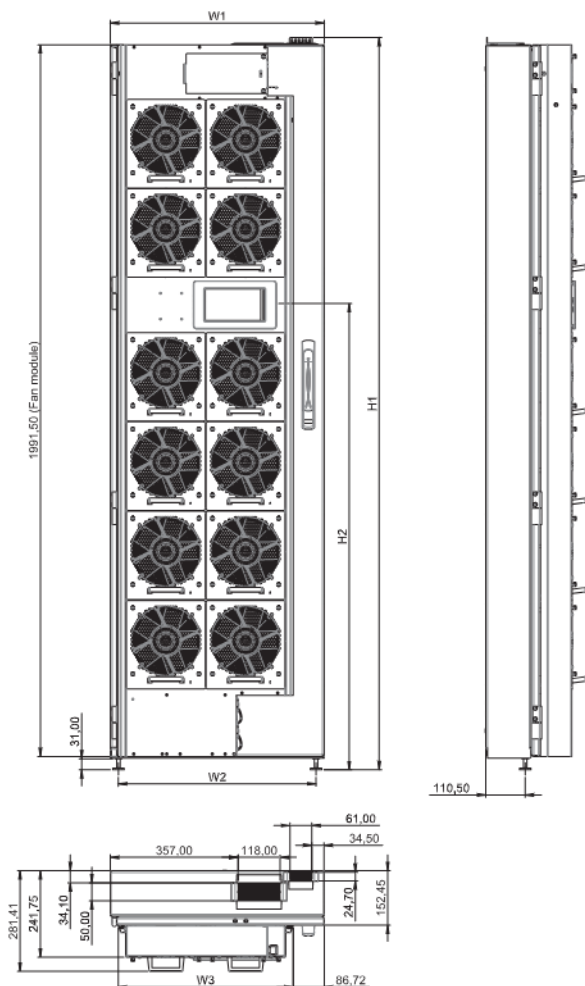


RDHX PRO

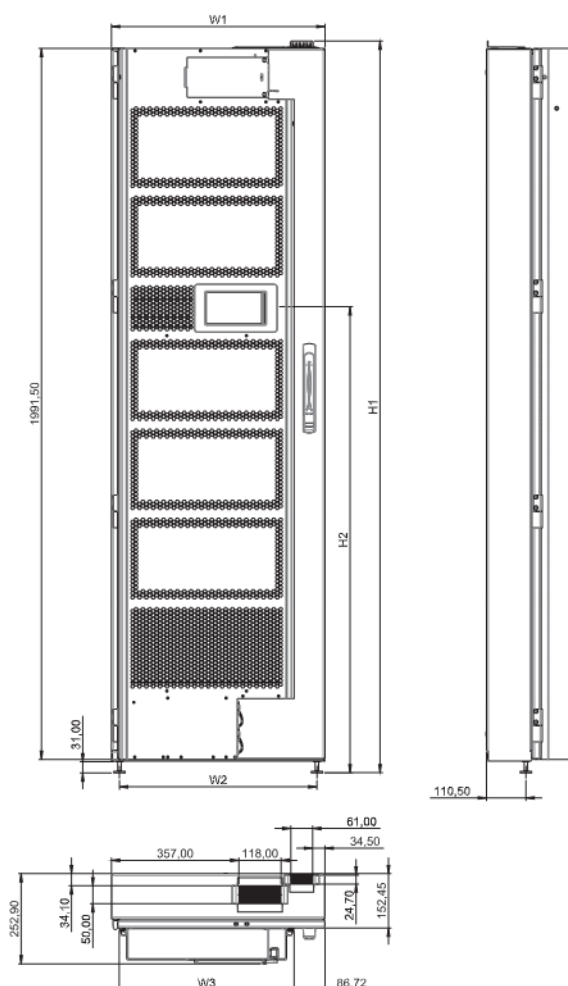
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DIMENSIONAL DRAWINGS

RDHX PRO Active



RDHX PRO Passive



TECHNICAL DATA

Item Number RDHX PRO Active	Item Number RDHX PRO Passive	Dimensions [mm]	Hinge Side	H1 [mm]	H2 [mm]	W1 [mm]	W2 [mm]	W3 [mm]
10630-200	10630-208	2000 H 600 W	Left	2048,8	1305,17	598,3	553	489,77
10630-201	10630-209	2000 H 800 W	Left	2048,8	1305,17	798,3	753	639,77
10630-202	10630-210	2200 H 600 W	Left	2248,8	1405,17	598,3	553	489,77
10630-203	10630-211	2200 H 800 W	Left	2248,8	1405,17	798,3	753	639,77
10630-204	10630-212	2000 H 600 W	Right	2048,8	1305,17	598,3	553	489,77
10630-205	10630-213	2000 H 800 W	Right	2048,8	1305,17	798,3	753	639,77
10630-206	10630-214	2200 H 600 W	Right	2248,8	1405,17	598,3	553	489,77
10630-207	10630-215	2200 H 800 W	Right	2248,8	1405,17	798,3	753	639,77

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TECHNICAL DATA

Power Supply Unit



Additional or replacement power supply unit for power redundancy or A/B feed applications.

Includes:

- Power Supply Unit 48 VDC/1800 W

Part No.	Description
11098-757-SP	Power Supply Flatpack S 48/1800 HE

Leak Detection Package



Wire rope leak detection is to be installed at the boundary of the condensate tray, alarm for major leaks inside the cooler.

Includes:

- 1 leak detection module
- 1 preassembled leak detection rope including interface cable and termination resistor

Part No.	Description
24630-199	Leak Detection Package

Condensate Drain, Top Feed



Enables condensate drain for top feed installations with a condensate pump.

Includes:

- 1 condensate pump, max. head 8 m
- 1 installation bracket and screws
- 1 flexible hose $\frac{3}{8}$ "

Part No.	Description
24630-198	Condensate Drain, Top Feed, 600 W
24630-209	Condensate Drain, Top Feed, 750 W

Condensate Drain, Top Feed



Replace the condensate drain cover in the condensate drain with a hose nipple and flexible hose.

Includes:

- 1 hose nipple
- 1 flat seal
- 1 threaded nut
- 1 transparent hose, inner diameter: Ø10 mm, length: 3 m
- 1 spring band clamp

Part No.	Description
24630-197	Condensate Drain, Bottom Feed, 600 W
24630-208	Condensate Drain, Bottom Feed, 750 W

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TECHNICAL DATA

Flexible Hoses



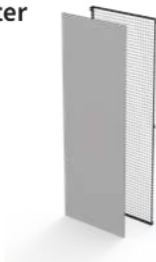
Flexible hoses to connect the cooler with facility coolant. Facility connection female BSPP 1" flat gasket. Cooler connection female BSPP 1" flat gasket or Danfoss FD83 quick disconnect couplers.

Includes:

- 2 flexible hose assemblies

Part No.	Description
24630-193	Flexible Hoses 2.4m, with valve and sensors
24630-201	Flexible Hoses 2.4 m, with valve
24630-211	Fitting Kit MM BSP1"/NPT1" (x2)

Door Filter



Door filter class F4 installs onto perforated panel at the internal side of the heat exchanger.

Includes:

- 1 door filter F4, 1 perforated cover panel, power-coated RAL7021

Part No.	Description
24630-200	RackChiller RDHX PRO door filter, 600 W
24630-202	RackChiller RDHX PRO door filter, 800 W

Rack Assembly Kits



Provides brackets which are required for installation of the RDHX PRO onto racks.

Includes:

- 6 assembly brackets and 12 screws
- 2 levelling feet

Part No.	Description
24630-206	Rack Assembly Kit for Proline S1 and Varistar CP
24630-207	Leveling Feet, 120 mm

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APPLICATION



Designed for HPC and warm water cooling, it allows free cooling under certain ambient temperatures, throughout the year.



Combined with nVent's cold plate liquid cooling solution to form a hybrid liquid cooling, the RDHX PRO solves the heat load of the server's non-cold-plate cooling section and achieves 100% liquid cooling for cold-plate data centers.

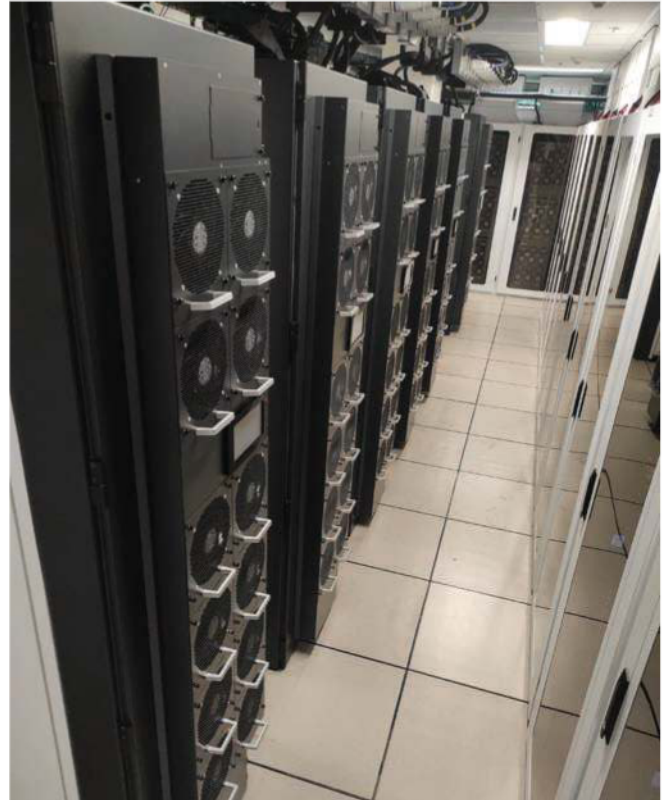
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CASES



Cloud Provider
High-Performance Computing



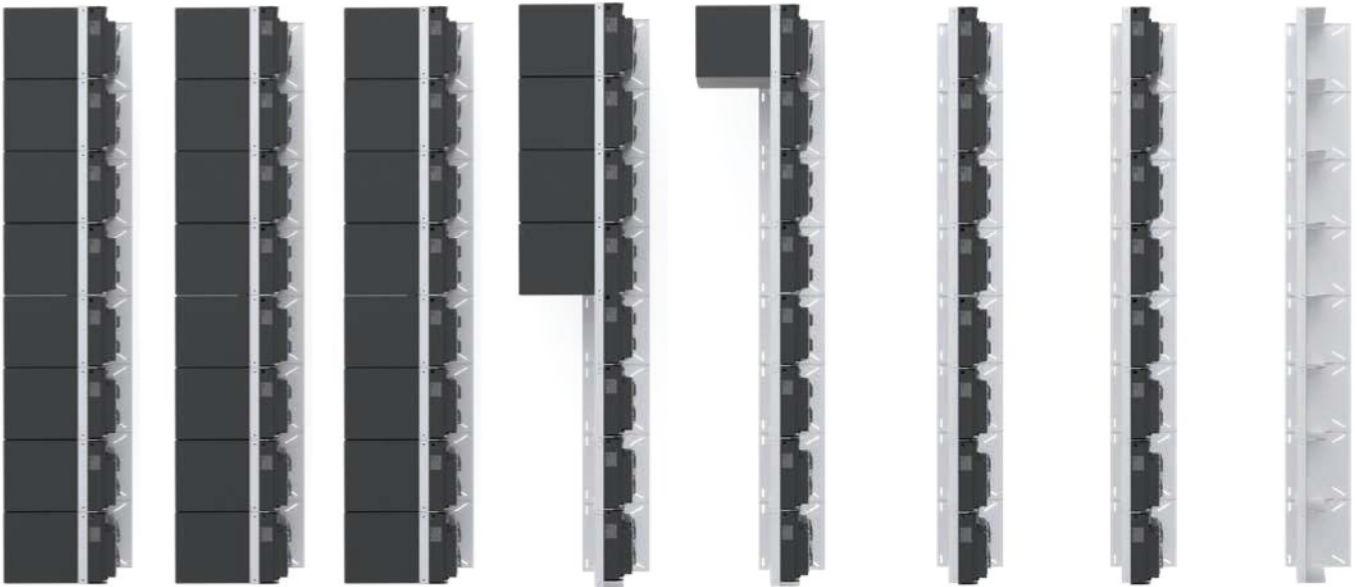
BASF
High-Performance
Computing Cluster

A Petascale HPC System @ BASF
Stephan Schenk

RDHX PRO

The Ultimate Rack And Roll Solution For Rear Door Heat Exchangers

**RDHX Pro Fan Wall Design,
scale your data center
as you grow.**



RDHX Fan Wall Design for Rack and Roll deployments,
reducing rack swap outs for RDHX



After bolting to the ground or hanging the RDHX Fan
wall frame to ceiling. Add the RDHX Pro system.



Add Racks in later ready for swap outs in the future



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