



NovaCool RDHx Catalog



Introduction: Who We Are

Listen, Innovate, Sustain

About Us: Inova is an innovative data center solutions provider, delivering reliable and scalable datacenter IT infrastructure. From cabinets and racks, power distribution, to cooling solutions and cable pathways, our comprehensive offerings ensure seamless data center operations.

Our Mission: At Inova, our mission is to revolutionize the data center landscape by providing cutting-edge, reliable, and scalable equipment solutions. Through our dedication to excellence, sustainability, and customer collaboration, we aim to be at the forefront of technological advancements, driving the industry towards new horizons and enabling our customers to achieve unprecedented success in their endeavors.



The name NovaCool embodies our commitment to cutting-edge cooling technology and energy efficiency, symbolizing a new star in the industry. Inspired by “Inova”, NovaCool represents innovation and excellence, setting a bright standard for the future of cooling solutions.

NovaCool RDHx delivers up to 85kW of cooling in a compact footprint, expertly handling high-temperature inlet water to boost free cooling and slash costs. Tool-free, hot-swappable EC fans (N+1 redundancy), dual power feeds with built-in ATS, and a standard leakage sensor streamline maintenance and safety. Rigorously tested by an external lab, it surpasses theoretical specs while offering best-in-class lead times—making it the ideal solution for high-density environments.

APPLICATION



Hyperscale Data Centers



Edge Data Centers



High-Performance Computing (HPC) Environments



AI & Machine Learning Infrastructure



Industrial Automation and Control Center

GENERAL FEATURES

- Maximum cooling duty up to 85kW @ 20°C water inlet and air supply @ 24°C
- Available in 600 mm and 800 mm width and 42RU, 48RU, and 52RU height.
- High-efficiency heat exchanger with a unique design.
- Dual Power feed with Inbuilt ATS.
- Toolless mounting of fans and controller.
- Hot swappable EC fans with N+1 redundant.
- Standard leakage sensor that automatically shuts off the water supply in case of a leak alarm, ensuring server safety.
- Flexible hoses are isolated from the IT equipment.
- Controller can be serviced while door remain closed.
- Rack Agnostic: Compatible to all Industry Standard Rack.

MONITORING CAPABILITIES

- Power supply health status monitoring (A & B).
- Monitoring the real time cooling capacity.
- Supply and Return water temperature monitoring. (Optional)
- Water pressure monitoring. (Optional)
- Water flow rate monitoring. (Optional)
- LED status indicators display various unit operating conditions.
- Room or external temp monitoring.
- Connectivity: Ethernet, Web Interface, Modbus TCP IP or BACnet.

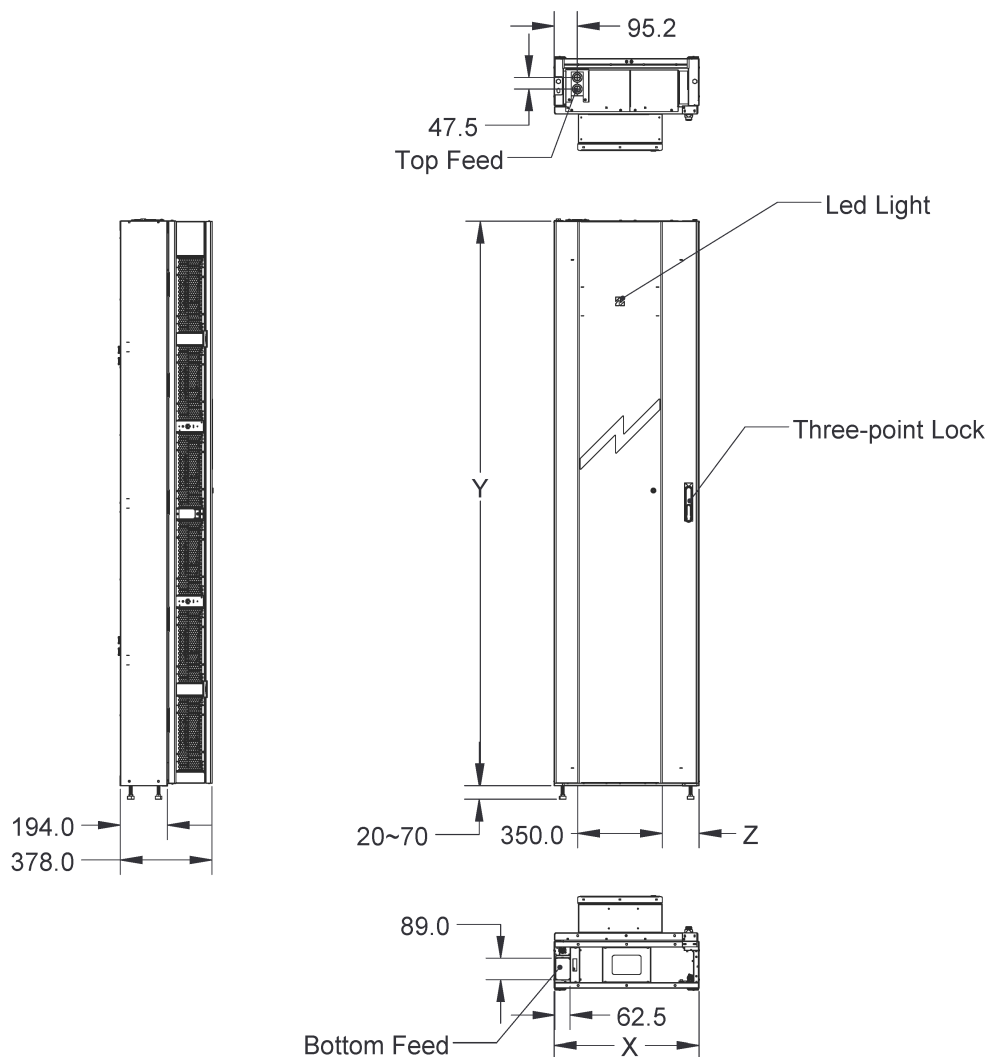
BENEFITS

- High capacity within a compact structural design.
- Rapid ROI and lower cost of ownership.
- Effectively manage high-temperature inlet water to maximize free cooling capabilities.
- Tool-free hot-swappable fans and controllers for easy maintenance and flexibility.
- The unit is tested by an external lab, ensuring guaranteed performance that goes beyond mere theoretical coil specifications.
- Industry-leading lead time.

Model		42U/45U		48U/52U	
		600W	800W	600W	800W
Total Cooling Capacity	kW	60*		85*	
Height	mm (")	2050 (80.7)		2330 (91.7)	
Width	mm (")	598 (23.5)	798 (31.4)	598 (23.5)	798 (31.4)
Depth	mm (")	380 (14.96")		380 (14.96")	
Number of Fans	Number of	5		6	
Dry Weight	Kg (lbs)	171 (377)	188 (415)	190 (419)	220 (485)
Wet Weight	Kg(lbs)	184 (406)	201 (443)	205 (452)	238 (525)
Color Shade		RAL 7035 Texture			
Locking System		3 Point Locking and Manual Key (Combination Lock and Smart Lock as an optional, cylinder optional)			
Pipe Connection		Top/Bottom – 25mm (1") with BSP or NPT			
Voltage Range		200-240V & 50/60Hz			
Max Power Draw	W	844		1013	
Intelligence		Automatic Fan and Valve control based on actual load demand			
Max Altitude	m (ft)	2000 (6562)			
Environment Temp	°C (°F)	5~50 (42~122)			
Pollution Degree		2			
Communication Protocol		Modbus TCP IP (Std), BACnet (opt)			
Standard Accessories (included)		Temperature Sensors			
		Flexible Hose Pipe (Supply and Return)			
		2-way Valve + Actuator			
		Leakage Sensor			
		Power Cord (A & B)			
		Crate Packing			
Optional Accessories		Fluid Inlet and Outlet Temperature Sensor			
		Flow Sensor (Supply Side)			
		Return Side Pressure Sensor			

* Conditions for rated capacity supply water temperature @20°C (68°F)/ return warm water temperature @30°C(86°F) and air supply temperature 24°C (75.2°F).

* Necessary infill panel shall be provided for 45U and 52U high cabinets.



Dimension Table

Part#	X (mm)	Y (mm)	Z (mm)	Fan Qty	Comments
NC1-642WL	598	2050	151	5	As the drawing shows, handle on the right.
NC1-648WL	598	2330	151	6	As the drawing shows, handle on the right.
NC1-842WL	798	2050	238	5	As the drawing shows, handle on the right.
NC1-848WL	798	2330	238	6	As the drawing shows, handle on the right.
NC1-642WR	598	2050	151	5	Mirror the views, handle on the left.
NC1-648WR	598	2330	151	6	Mirror the views, handle on the left.
NC1-842WR	798	2050	238	5	Mirror the views, handle on the left.
NC1-848WR	798	2330	238	6	Mirror the views, handle on the left.

Fan Performance for 42U/45U				
Fan Speed in %	25%	50%	75%	100%
Air Flow in m3/h (CFM) #	2125 (1250)	4250 (2501)	6374 (3751)	8500 (5002)
Power Draw in Watts	39	150	411	844
Total Fan Noise in dB	62	72	79	85

Fan Performance for 48U/52U				
Fan Speed in %	25%	50%	75%	100%
Air Flow in m3/h (CFM)	2550 (1500)	5100 (3001)	7650 (4502)	10200 (6003)
Power Draw in Watts	47	180	496	1013
Total Fan Noise in dB	63	73	80	86

Optimize the maximum flow according to the server's designed static pressure capabilities.

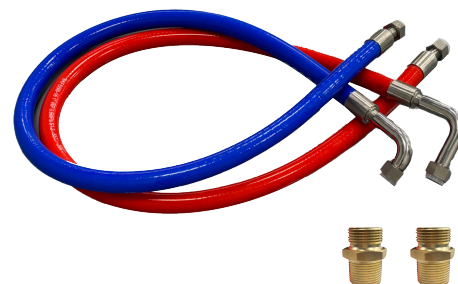
NovaCool RDHx

Part#	Fit Cabinet	Dimensions	Fans Qty	Hinge Side	Color
NC1-642WL	42U * 600 45U * 600	W: 598mm H: 2050mm D: 380mm	5	Left	RAL7035
NC1-648WL	48U * 600 52U * 600	W: 598mm H: 2330mm D: 380mm	6	Left	RAL7035
NC1-842WL	42U * 800 45U * 800	W: 798mm H: 2050mm D: 380mm	5	Left	RAL7035
NC1-848WL	48U * 800 52U * 800	W: 798mm H: 2330mm D: 380mm	6	Left	RAL7035
NC1-642WR	42U * 600 45U * 600	W: 598mm H: 2050mm D: 380mm	5	Right	RAL7035
NC1-648WR	48U * 600 52U * 600	W: 598mm H: 2330mm D: 380mm	6	Right	RAL7035
NC1-842WR	42U * 800 45U * 800	W: 798mm H: 2050mm D: 380mm	5	Right	RAL7035
NC1-848WR	48U * 800 52U * 800	W: 798mm H: 2330mm D: 380mm	6	Right	RAL7035



Pipe Kits

Part#	Thread Type	Liquid Entry	Length	Color
NC1-P38BSPT	With BSPP to BSPT thread connector	Bottom	3.8m	1 Blue 1 Red
NC1-P38NPT	With BSPP to NPT thread connector	Bottom	3.8m	1 Blue 1 Red
NC1-P20BSPT	With BSPP to BSPT thread connector	Top	2.0m	1 Blue 1 Red
NC1-P20NPT	With BSPP to NPT thread connector	Top	2.0m	1 Blue 1 Red



Power Cords

Part#	Plug Type	Power Feed	Length	Compliance
NC1-C19C20UL35	C20	Top	3.5m	UL
NC1-C19C20UL60	C20	Bottom	6.0m	UL
NC1-C19C20VDE35	C20	Top	3.5m	VDE
NC1-C19C20VDE60	C20	Bottom	6.0m	VDE



Actuator Kits

Part#	Des.	Note
NC1-ACTZTU	Actuator Commissioning Tool	Optional
NC1-ACT	5Nm Actuator Suit for 1" ball valve	Must have

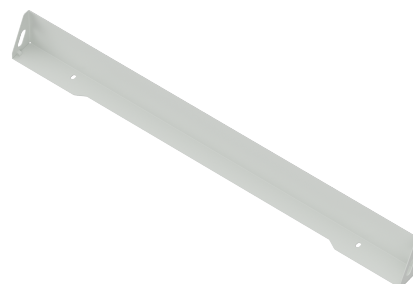


Valve Options

Part#	Valve Size	Kvs	Cv	End Fitting	Flow Pattern
NC1-VLV63NPT	1"		7.4	Internal NPT	2-Way
NC1-VLV100NPT	1"		10	Internal NPT	2-Way
NC1-VLV63BSPT	1"	6.3		Internal BSPT	2-Way
NC1-VLV100BSPT	1"	10		Internal BSPT	2-Way
NC1-3VLV63NPT	1"		7.4	Internal NPT	3-Way
NC1-3VLV63BSPT	1"	6.3		Internal BSPT	3-Way

Door Header

Part#	Des.	Fit with
NC1-652HW	NovaCool RDHx, fit with 600mm 52U cabinet header, light gray RAL7035.	NC1-648WL/R
NC1-852HW	NovaCool RDHx, fit with 800mm 52U cabinet header, light gray RAL7035.	NC1-848WL/R



Commissioning Tool

Part#	Des.
NC1-OPHMI	NovaCool RDHx, Commissioning Tool.



Sensor Kits

Part#	Des.
NC1-VFSN	NovaCool RDHx, VFS sensor with communication cable in 1.2m, with NPT adaptor.
NC1-VFSB	NovaCool RDHx, VFS sensor with communication cable in 1.2m, with BSPT adaptor.
NC1-RPSN	NovaCool RDHx, RPS sensor with communication cable in 1.2m, with pipe protection and NPT adaptor.
NC1-RPSB	NovaCool RDHx, RPS sensor with communication cable in 1.2m, with pipe protection and BSPT adaptor.





Ready to revolutionize your data center operations? Embrace the high-performance, adaptable cooling offered by NovaCool RDHx for maximum efficiency and peace of mind.

For inquiries and consultation, please reach out at
sales@inovadc.com