Vertiv™ VRC Split Rack Cooling System

Flexible Cooling for Small Rooms and Edge Applications

2020 AHR Expo Innovation Award Finalist

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Flexible, Efficient Cooling for Any Small Space

The Vertiv™ VRC split rack cooling system brings flexibility and efficiency to small-space cooling. It is ideal for protecting critical IT equipment in server rooms, network closets, and edge computing spaces where rejecting heat into the building isn't an option. Providing up to 3,500 watts of IT server cooling in a space-saving design, the system includes an outdoor unit that rejects heat into the ambient air, allowing it to operate efficiently regardless of building architecture. The energy-efficient features and scalable capacity of the Vertiv VRC system solve a variety of cooling issues even in your most challenging small spaces.

As growth at the edge of networks continues to expand exponentially, and seek to maximize useful, revenue-generating space in their facilities, room for IT is shrinking. IT managers struggle with how to properly protect critical equipment without sacrificing valuable floor space, especially in areas that lack a double ceiling or a building air conditioning system. Until now, available cooling solutions either lacked the capacity, were too large, or didn't work with the building architecture. The Vertiv VRC split rack cooling system solves that problem with a space-saving solution that can work in any building, including spaces with unconditioned air.

Designed for Any of Your Small Spaces

The Vertiv VRC split rack cooling system is designed specifically for installation in small server rooms, network closets, and edge computing spaces that lack a double ceiling, building air conditioning, or the ability to handle in-building heat rejection. The split system consists of indoor and outdoor units connected with two field-installed copper pipes. The heat removed from IT equipment is transferred through the pipes and rejected outdoors into the ambient air. The indoor unit fits into most standard racks. It can be installed at the top or bottom of the rack, occupying only 6U and freeing up valuable floor and rack space. This configuration makes the Vertiv VRC system a seamless small room cooler, especially those small IT spaces.

Reliable, Efficient Operation Protects Your Equipment and Budget

The Vertiv VRC split rack cooling system provides up to 3,500 watts of IT cooling to critical equipment. Its variable-speed components ensure high efficiency and scalable capacity, delivering only as much cooling as needed for the conditions in the room. This load matching helps reduce energy consumption while reliably meeting your changing IT needs.

Keeping You on Top of Rack Mount Cooling Performance

IT managers can monitor the status of the Vertiv VRC split cooling system on the unit's display or remotely using the plug-in SNMP communication card or Modbus RTU. If cooling ever falls outside of predefined thresholds, staff will receive instant notifications and can take action to protect valuable IT equipment.

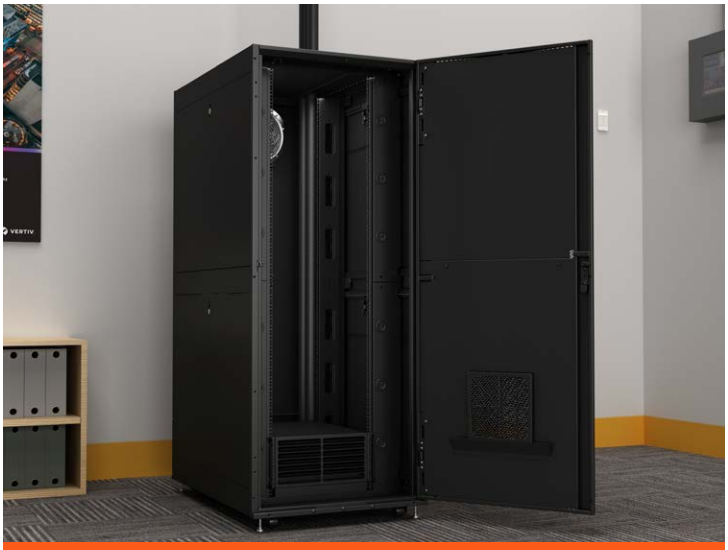
Vertiv™ VRC Applications Examples

Vertiv VRC Applications

- Vertiv™ VRC can be installed on 2 post or 4 post racks
- Optional 2 post rack installation kit is available to enable easy installation into 2 post
- It can be installed in both - Open or closed racks

4 Post Rack Installation

2 Post Rack Installation



4 Post Rack Installation in a thermally separated rack

TARGET APPLICATIONS:

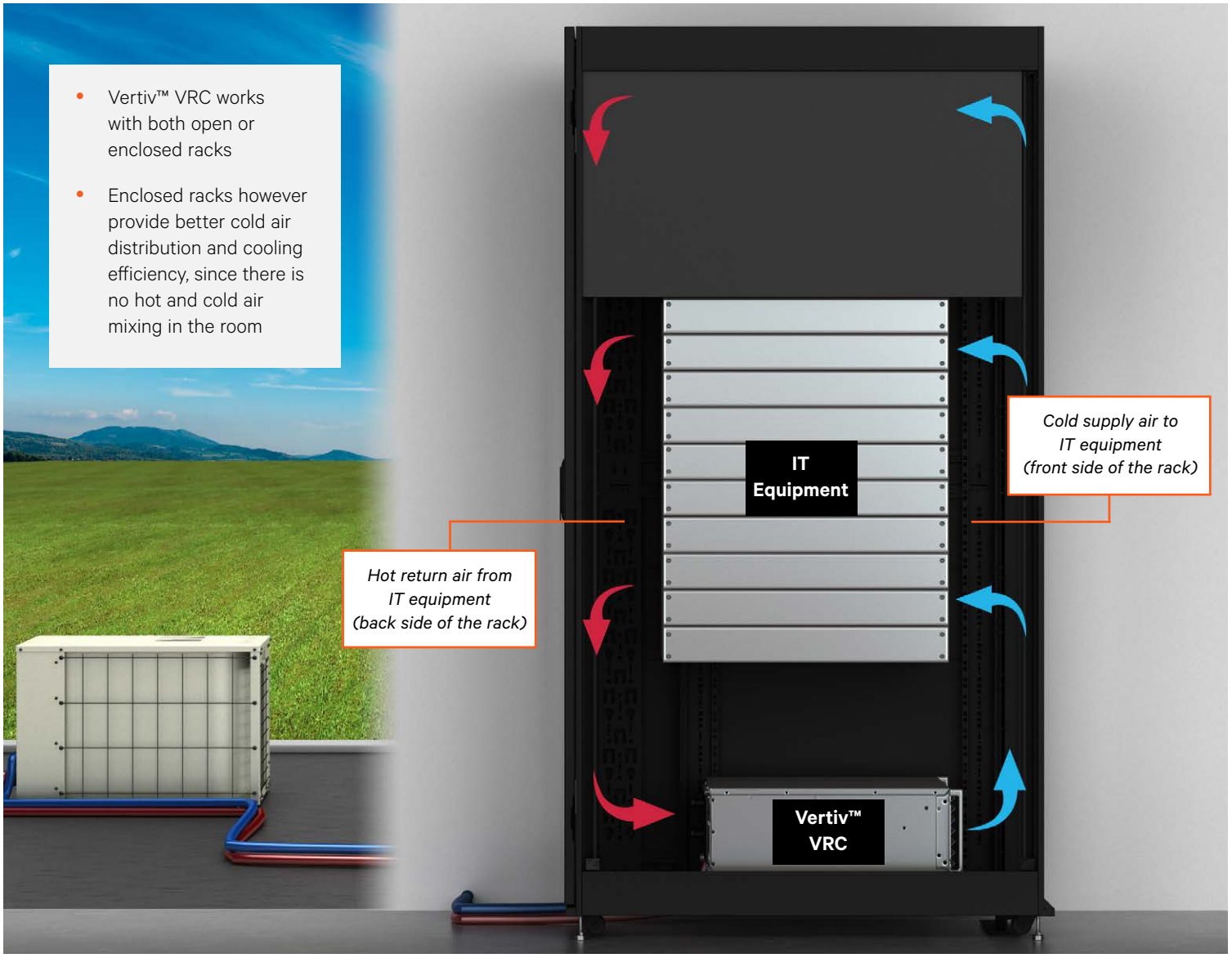
- Network Closets
- Small Server Rooms
- Edge Spaces

END USER SEGMENTS:

- Retail
- Education
- Healthcare
- Finance
- Telecom
- Industry

Key Benefits

- Reliably and efficiently satisfies cooling requirements for small room and edge applications up to 3.5 kW per cabinet, regardless of building architecture and independent of a building cooling system
- Requires only 6U due to space-saving form factor that leaves the valuable floor and rack space free in small IT rooms
- Lowers energy consumption and reduces operating costs due to real-time cooling and capacity adjustments
- Offers installation flexibility with options for mounting at the top or bottom of standard racks
- Provides peace of mind and simplified management with unit-level or remote monitoring capabilities
- 2 years standard warranty



Airflow Diagram Vertiv™ VRC

Vertiv™ VRC Split Rack Cooling System Features

- **Rack-mounted indoor unit** requiring only 6U and designed to fit at either the top or bottom of most standard Electronic Industries Alliance (EIA) 19-inch network racks
- **Outdoor unit with compressor** for heat rejection into the ambient air
- **Low ambient air temperature operation** that is down to -15C (5F) on the standard outdoor unit or -34C (-30F) on the low-ambient unit enabling IT equipment cooling during winter months
- **Variable speed compressor and fans** to match cooling with the load in the room
- **Add-on condensate pump** to help remove water and simplify condensate management
- **Multiple monitoring options** include an on-unit display, plug-in SNMP card for monitoring remotely over the network, and Modbus RTU for connection to the building management system
- **Alarm notifications** sent via email or SMS
- **Up to 30m (98ft) piping length** between indoor and outdoor unit
- **Vertical distance between indoor and outdoor unit** from -5m to +15m (from -16.4ft to +49ft)

Standard outdoor unit

Low ambient outdoor unit

Included in the Packaging

Image	Description:
	**L-shape Mounting Rail Kit** • Enable Vertiv™ VRC unit installation into a 19” 4 post Rack
	**SIC Card Kit** • Remote monitoring card with housing • SNMP, Web and Modbus protocols
	**Condensate Pump Kit** • Automatically removes condensed water from the cooling unit. • 25 ft (7,5m) long drain pipe included in the packaging
	**Remote Display** • Change Setpoints and See alarms through user friendly interface • With magnetic holder can be attached to any metal surface • Cable included

Technical Specifications

SKU#	VRC202KIT-N	VRC202KIT-L
Indoor unit model **Outdoor unit model**	**VRC202KIT** **VRC302KIT**	**VRC202KIT** **VRC352KIT**
Minimum Outdoor Operating Temperature	**-15°C (+5°F)**	**-34°C (-29°F)**
Region	Europe, Middle East and Africa	Europe, Middle East and Africa
Input Voltage	230V/1Ph/50-60Hz	230V/1Ph/50-60Hz
Net Sensible Cooling Capacity*	3800W (13000BTU/h)	3400W (11600BTU/h)
Capacity Modulation	25 - 100%	25 - 100%
Power connection	Hard Wired (terminal block)	Hard Wired (terminal block)
Total Current (indoor / outdoor)	1,5A / 7,2A	1,5A / 7,2A
Refrigerant	R410A	R410A
Communications	SNMP, Modbus RTU	SNMP, Modbus RTU
Approvals	CE	CE
Standard Warranty	2 years	2 years
Occupied U space	6U	6U
Dimensions Indoor (H x D x W)	264 x 602 x 442 mm	264 x 602 x 442 mm
Dimensions Outdoor (H x D x W)	527 x 282 x 786mm	527 x 282 x 1158mm
Weight (indoor / outdoor)	23kg/44kg	23kg/68kg

*Air Temperature to IT equipment 21°C (70°F), Outdoor air temperature 35°C (95°F)

Optional Accessories

Accesory	Description	Height
2 Post Rack Mounting Kit	2POSTRMKITVRC	This Kit enables Installation of the Vertiv™ VRC unit in a 2-post rack

Services

Service Offering	Description	Included
Preferred Warranty	Two-year protection program for Vertiv™ VRC. It can be purchased only at the point of sale, it is valid throughout the two-year warranty period	Coverage of faulty parts as per standard warranty terms • Labor and travel coverage as per standard warranty terms • 8 working hours response time • One annual preventive maintenance visit • 24x7 access to professional helpline
Integrated Warranty Extension	One-year after-warranty protection program	Coverage of faulty parts excluding consumables • Labor and travel coverage • 8 working hours response time • One annual preventive maintenance visit • 24x7 access to professional helpline
Additional Services	Additional services available on 8x5 or 24x7 basis	• Electrical and mechanical installation • Start-up

Vertiv.com | **Vertiv Headquarters,** 1050 Dearborn Drive, Columbus, OH, 43085, USA

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