# Net-Contain™ Vertical Exhaust Ducts (VEDs) for Net-Access™ N-Type and S-Type Cabinets

**PANDUIT**®

## specifications

Vertical exhaust duct shall channel heat from server exhaust directly to the data center return plenum. The system shall increase CRAH unit cooling efficiency and lower operating expenses. The vertical exhaust duct shall leverage existing server fans to direct the flow of hot exhaust air, reducing energy costs and noise levels. The system shall be passive, containing no moving parts resulting in a more energy efficient solution than comparable forced-air options. The vertical exhaust duct shall address high heat loads per cabinet to enable dense server applications and eliminate data center hot spots. The vertical exhaust duct shall be modular, capable of being added without disrupting existing in-cabinet equipment and cabling to enable a migration path.

## technical information

| *Dimensions:* | | |
|---|---|---|
| | C2VED08I1626*1: | 16.0" up to 26.0"H x 30.5" W x 17.9" D (406.4mm up to 660.4mm x 763.5mm x 454.5mm) |
| | C2VED08I2638*1: | 26.0" up to 38.0"H x 30.5" W x 17.9" D (660.4mm up to 965.2mm x 763.5mm x 454.5mm) |
| | C2VED08I3866*1: | 38.0" up to 66.0"H x 30.5" W x 17.9" D (965.2mm up to 1676.4mm x 763.5mm x 454.5mm) |
| | C2VED07I1626*1: | 16.0" up to 26.0"H x 26.1 W x 17.9" D (406.4mm up to 660.4mm x 663.5mm x 454.5mm) |
| | C2VED07I2638*1: | 26.0" up to 38.0"H x 26.1 W x 17.9" D (660.4mm up to 965.2mm x 663.5mm x 454.5mm) |
| | C2VED07I3866*1: | 38.0" up to 66.0"H x 26.1 W x 17.9" D (965.2mm up to 1676.4mm x 663.5mm x 454.5mm) |
| | C2VED06I1626*1: | 16.0" up to 26.0"H x 22.2"W x 17.9"D (406.4mm up to 660.4mm x 563.5mm x 454.5mm) |
| | C2VED06I2638*1: | 26.0" up to 38.0"H x 22.2"W x 17.9"D (660.4mm up to 965.2mm x 563.5mm x 454.5mm) |
| | C2VED06I3866*1: | 38.0" up to 66.0"H x 22.2"W x 17.9"D (965.2mm up to 1676.4mm x 563.5mm x 454.5mm) |

## key features and benefits

| | |
|---|---|
| *Transfers heat load directly to return plenum to reduce the number of CRAH units* | Lowers energy costs up to 40% and capital construction expenditures for increased network reliability and lowest cost of ownership |
| *Prevents hot spots and allows installation of high-density server cabinets close together in new builds or existing data centers* | Reduces the need for extra real estate and additional CRAH units for increased data center cooling |
| *Works with leading server suppliers (HP, IBM, Dell, Sun) via uniform and proper air flow distribution within servers* | Verified interoperability, minimizes risk of overheating for increased network reliability |
| *Contains no moving parts to passively direct the heated air out of the data center* | Eliminates acoustical noise and failure points for increased network reliability |
| *Reduces the need for flow balancing in raised floor and return plenums* | Minimizes local hot spots within the data center and improves CPU/network reliability |
| *Infinitely adjustable within specified range of vertical exhaust system* | Allows for variable ceiling heights and ease of installation |

## applications

Net-Contain™ Vertical Exhaust Ducts optimize data center airflow for a highly efficient passive thermal management solution by channeling heat from the cabinet directly to the overhead ceiling return plenum increasing cooling efficiency and significantly lowering operating expenses. This passive exhaust system removes heated air without additional moving parts and enables increased server densities by preventing hot and cold air mixing and eliminating hot spots. The vertical exhaust system can be utilized during an initial installation or can be added when required as heat densities increase. Cabinets with VED solution must utilize a solid rear door to direct the hot air to the above plenum area.

### Net-Contain™ Vertical Exhaust Ducts (VEDs)

| | |
|---|---|
| *For 800mm W Net-Access™ Cabinet, 16" up to 26"H:* | C2VED08I1626*1 |
| *For 800mm W Net-Access™ Cabinet, 26" up to 38"H:* | C2VED08I2638*1 |
| *For 800mm W Net-Access™ Cabinet, 38" up to 66"H:* | C2VED08I3866*1 |
| *For 700mm W Net-Access™ Cabinet, 16" up to 26"H:* | C2VED07I1626*1 |
| *For 700mm W Net-Access™ Cabinet, 26" up to 38"H:* | C2VED07I2638*1 |
| *For 700mm W Net-Access™ Cabinet, 38" up to 66"H:* | C2VED07I3866*1 |
| *For 600mm W Net-Access™ Cabinet, 16" up to 26"H:* | C2VED06I1626*1 |
| *For 600mm W Net-Access™ Cabinet, 26" up to 38"H:* | C2VED06I2638*1 |
| *For 600mm W Net-Access™ Cabinet, 38" up to 66"H:* | C2VED06I3866*1 |

### Net-Access™ N-Type Cabinets
#### 800mm x 45 RU x 1200mm

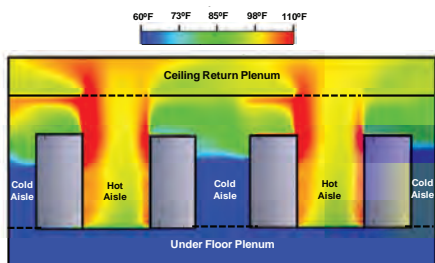| | |
|---|---|
| *45 RU, front dual hinge door, rear solid split doors, cage nut rails, vertical blanking panels, cable management vertical exhaust duct ready:* | N8529*Y |
| *45 RU, front dual hinge door, rear solid split doors, (1) side panel, cage nut rails, vertical blanking panels, cable management vertical exhaust duct ready:* | N8521*Y |
| *45 RU, front dual hinge door, rear solid split doors, 12-24 tapped rails, vertical blanking panels, cable management vertical exhaust duct ready:* | N8529*N |
| *45 RU, front dual hinge door, rear solid split doors, (1) side panel, 12-24 tapped rails, vertical blanking panels, cable management vertical exhaust duct ready:* | N8521*N |

### Net-Access™ S-Type Cabinets
#### 600mm x 42 RU x 1200mm

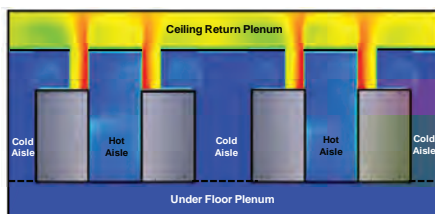| | |
|---|---|
| *42 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals:* | S6229*V |
| *42 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals:* | S6222*V |

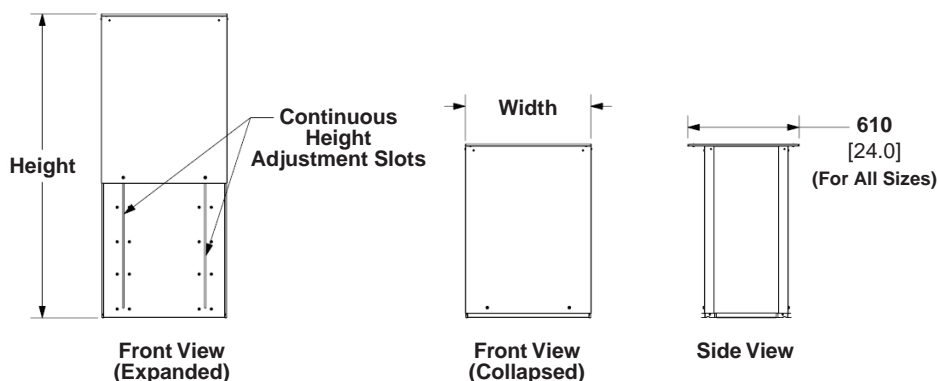# Net-Contain™ Vertical Exhaust Ducts (VEDs) for Net-Access™ N-Type and S-Type Cabinets

**Without VED**

In a traditional raised floor with ceiling returns configuration (hot aisle/cold aisle) hot air can recirculate to the front of the enclosure, heating the top portion of the rack.

*Hot Spots Develop Without VES*

**With VED**

The Panduit VED optimizes thermal efficiency by moving hot air through vertical ducts directly to the return plenum.

*VES Deployed*

**Height** — Continuous Height Adjustment Slots

**Width**

**610 [24.0] (For All Sizes)**

**Front View (Expanded)** | **Front View (Collapsed)** | **Side View**

| Part Number | Height | Width | Depth |
|---|---|---|---|
| C2VED08I3866*1 | 38.0" up to 66.0" (965.2mm up to 1676.4mm) | 30.5" (763.5mm) | |
| C2VED07I3866*1 | | 26.1" (663.5mm) | |
| C2VED06I3866*1 | | 22.2" (563.5mm) | |
| C2VED08I2638*1 | 26.0" up to 38.0" (660.4mm up to 965.2mm) | 30.5" (763.5mm) | 17.9" (454.5mm) |
| C2VED07I2638*1 | | 26.1" (663.5mm) | |
| C2VED06I2638*1 | | 22.2" (563.5mm) | |
| C2VED08I1626*1 | 16.0" up to 26.0" (406.4mm up to 660.4mm) | 30.5" (763.5mm) | |
| C2VED07I1626*1 | | 26.1" (663.5mm) | |
| C2VED06I1626*1 | | 22.2" (563.5mm) | |

Dimensions are in inches. (Dimensions in parenthesis are metric).

### Net-Access™ S-Type Cabinets

**600mm x 45 RU x 1200mm**

| | |
|---|---|
| 45 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S6529*V |
| 45 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S6522*V |

**700mm x 42 RU 1200mm**

| | |
|---|---|
| 42 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S7229*V |
| 42 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S7222*V |

**700mm x 45 RU 1200mm**

| | |
|---|---|
| 45 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S7529*V |
| 45 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S7522*V |

**800mm x 42 RU x 1200mm**

| | |
|---|---|
| 42 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S8229*V |
| 42 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S8222*V |

**800mm x 45 RU x 1200mm**

| | |
|---|---|
| 45 RU, single hinge perforated front door, single solid rear door, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S8529*V |
| 45 RU, single hinge perforated front door, single solid rear door, (2) side panels, casters, pou brackets, cage nut rails, vertical exhaust ready, front and rear floor seals: | S8522*V |

*Indicates optional colors. Replace * with B = Black, or W = White

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