

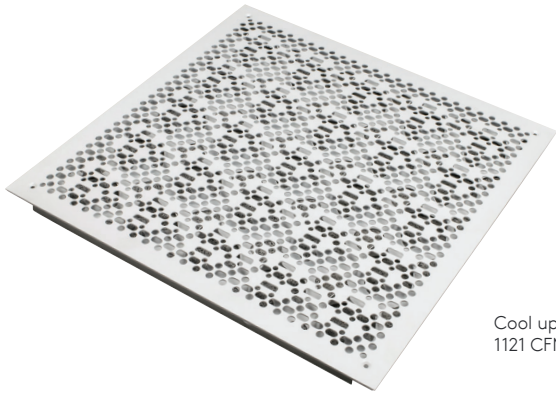
Airflow Panels & Controls

DirectPerf® 32%



Cool the Same Load as Vertical Plume Panels with Half the Airflow

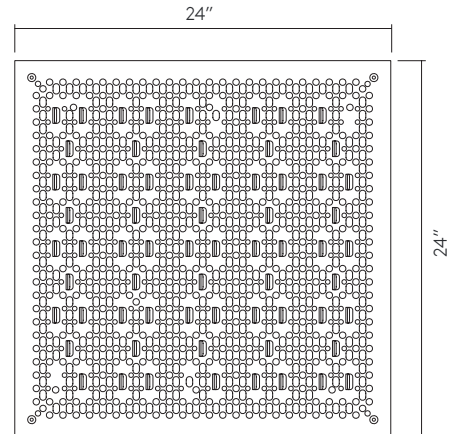
In uncontained spaces, directional airflow provided by a DirectPerf 32% panel provides nearly the same cooling capacity as a standard 56% open area grate using about half the airflow.



Cool up to 8 kW with
1121 CFM @ .10" H₂O

Profile

Top View



Side View



Key Performance Characteristics

- Same kW cooling capacity as GrateAire
- 32% open area delivers 1,121 CFM @ .1" H₂O when installed without a damper
- Directional air flow achieves a 88% capture index
- Cools up to 8 kW per rack
- Can save over 40% in annual fan energy without the use of containment
- Easily integrates into an existing 24" and 60 cm raised floor systems
- Single-zone and Multi-zone Opposed Blade Damper control options available

Load Performance Chart*

Airflow Panel	Understructure	System Weight (lbs/sqft)	Static Loads (lbs)			Rolling Loads (lbs)		Impact Load (lbs)	Capture Index* (%)	Open Area (%)
			Design Load	Safety Factor	Ultimate Load	10 Passes	10,000 Passes			
DirectPerf 32%	Bolted Stringer	6.25 (30 kg/m ²)	1250 (5.6 kN)	Min. > 2	>2500 (11.1 kN)	–	–	150 (68 kg)	88	32

All tests are performed using CISCAs Recommended Test Procedures for Access Floors with the exception of Design Load.

1. System Design Load is based on permanent set $\leq 0.010"$ and is verified by loading panels in accordance with the CISCAs concentrated load method but with panels installed on actual understructure instead of steel blocks. (Testing on blocks does not represent performance of an actual installation.) Ultimate, Rolling, and Impact Load tests are performed using CISCAs Test Procedures.

2. Safety Factor is Ultimate Load divided by Design Load.

CFM & kW Capacity

Airflow Control	0.02" H ₂ O (5 Pa)		0.04" H ₂ O (10 Pa)		0.06" H ₂ O (15 Pa)		0.08" H ₂ O (20 Pa)		0.10" H ₂ O (25 Pa)	
	CFM (L/s)	(kW/Rack)	CFM (L/s)	(kW/Rack)	CFM (L/s)	(kW/Rack)	CFM (L/s)	(kW/Rack)	CFM (L/s)	(kW/Rack)
w/o Damper	531 (251)	3.7	744 (351)	5.2	890 (420)	6.2	1010 (477)	7.1	1121 (529)	7.8
w/OBD	480 (227)	3.4	693 (327)	4.8	822 (388)	5.7	963 (454)	6.7	1063 (502)	7.4

Cooling capacity per rack is based on: CFM x Capture Index % / 126 (CFM needed to cool 1 kW @ 25° ΔT).

Tests Conducted with fans operating at 100% power and dampers 100% open.

Airflow Panels & Controls

DirectPerf® 32% Airflow Controls

Opposed Blade Damper (OBD)

Tate's Single-zone Opposed Blade Damper offers a dramatic airflow improvement over traditional manual slide dampers. It features a nearly infinite range of adjustment and very little airflow resistance. Easy access through the panel's surface allows for quick adjustment of airflow balancing to IT hardware.



Opposed Blade Damper for use with DirectAire®, DirectAire® AI, DirectPerf 32% and GrateAire® Panels

Multi-Zone Opposed Blade Damper

Tate's Multi-zone Opposed Blade Damper enables the airflow delivery to be balanced based on the specific load in the rack. The damper allows data center operators to individually adjust airflow to three zones within the rack – top, middle and bottom.



Multi-zone Opposed Blade Damper for use with DirectAire®, DirectAire® AI or DirectPerf 32% Panels

Key Performance Characteristics

- Provides more airflow at 100% open than slide dampers
- Easily adjustable from above without panel removal
- Field-mounted design available for DirectPerf 32%

Key Performance Characteristics

- Reduces cooling energy usage
- For use with full or partial loaded racks
- Provides the most granular airflow control available
- Easily adjustable from above without panel removal
- Drop-in design allows for easy retrofits under airflow panels
- Field-mounted design available for DirectPerf 32%