

Access Floor Solutions

Product Guide



SustainAbility
to the Power of **Tate**®



Developer/Built-to-Suit: KDC Development,
AAA Customer Contact Center, Oklahoma City, OK, 150,000 ft²



High Performance and Sustainable: Great River Energy,
Maple Grove, MN, 166,000 ft², LEED Platinum

Tate Access Floors & SustainAbility®

Social and environmental responsibility have long been key corporate objectives within Tate. Through continuous improvements and focus our **Ability** to **Sustain** our environment, customers, community and company is stronger today than it has ever been.

Environment: Over the years Tate has taken many initiatives to reduce the environmental impact of our manufacturing process from reducing energy usage through automation, significantly reducing VOC's from the paint line and implementing a 100% grey water recycling system on the auto-fill line. Our quest for continual improvement has recently lead us to ISO 14001:2004 & ISO 9001:2008 certifications and membership in the EPA's Climate Leaders program to set aggressive goals for reducing our GHG emissions.



Developer/Multi-Tenant: Buchanan Partners, Bowie Corporate Center, Bowie, MD, 125,000 ft², LEED Gold



Municipal Government: Johnson County Sunset Drive, Olathe, KS, 136,000 ft², LEED Gold



Customers: Tate is committed to providing the best quality access floors in the world by requiring stringent product performance and consistency criteria from both its manufacturing operations and partners. With the continued addition of sustainable technology and capacity in our fully owned manufacturing facilities, coupled with international manufacturing agreements we ensure our ability to respond to our customer's needs quickly and efficiently delivering on-time shipment of material at a rate needed to support any size installation.

Access flooring and underfloor service distribution offer a more sustainable solution for the design and construction of commercial buildings. The distribution of HVAC, electrical power, voice and data cabling and other utilities underneath an accessible modular floor offers enhanced energy-efficiency, life-cycle material savings, configuration flexibility and sustainability.



Community: As an advocate of green construction we support both our business and local community through participations in key organizations, ethical procurement and supply chain management and social responsibility



Company: Tate is ensuring the sustainability of our company through our graduate recruitment and mentoring program and by giving each employee adequate training in sustainability issues. Being sure that everyone from key suppliers to installation contractors are fully involved in helping maintain the **SustainAbility** of Tate.

To learn more about Tate's **SustainAbility** visit us online at www.tateaccessfloors.com/sustainability.aspx

Technical Resources: Design & Resource Support

Tate offers a variety of avenues to access our unsurpassed technical assistance and support from design through construction completion. Draw upon our unmatched breadth of experience using one or more of our valuable resources.

'Tate Technical Hotline'

Dial 800.231.7788 e-mail tateinfo@tateaccessfloors.com to consult directly with our engineers for design and construction support or assistance with seismic calculations.



Design & Specification Guide

A comprehensive resource for architects and specifiers complete with full product details, architectural drawings and specifications in CSI format.



On-Site & On-Line Education

AIA, USGBC, IFMA and IDCEC continuing education credits are available through on-site underfloor service distribution presentations by Tate professionals, or by visiting www.tateaccessfloors.com/resources/online_education.aspx.



Plenum Integrity Guides

Trade specific guides for properly designing, sealing, inspecting and commissioning underfloor air distribution systems are available for the architect, general contractor, and commissioning agent.



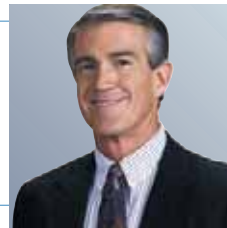
Interactive Cost Model

Use this tool to create customized cost comparisons of conventional overhead service distribution versus access floor and underfloor services. Contact us for a demonstration.



Dealer Network

Tate's worldwide team of dealers will assist you with your building needs. Find a dealer in your area by clicking on contacts at www.tateaccessfloors.com.



High Performance & Sustainable Building

As a member of the US Green Building Council, Tate participates in supporting the goals of creating a healthy environment. Contact a Tate LEED™ Accredited professional to find out how underfloor service distribution contributes to achieving points in three of the five rating categories that will LEED™-certify your building or visit our website at www.tateaccessfloors.com/tate_leeed.aspx



Comprehensive Website

Find everything you need from detailed product information, technical support documentation and specifications to industry links, project case studies and more at www.tateaccessfloors.com.



Visit www.tateaccessfloors.com or call the **Technical Services Team** at 800.231.7788.



Courthouse: E. Barrett Prettyman Courthouse,
Washington D.C., MD, 120,000 ft²



Higher Education:
Northern Arizona University
Applied Research & Development,
Flagstaff, AZ, 60,000 ft²,
LEED Platinum

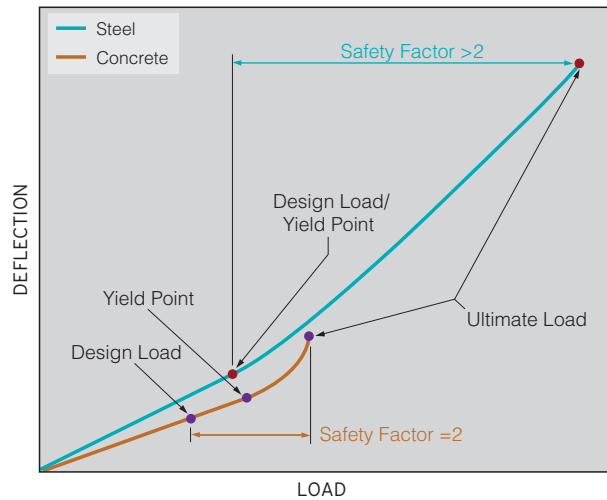


Important Load Criteria and Key Features

Performance criteria such as design loads and safety factors are often over-looked when evaluating an access flooring system. The design load, often referred to as the safe working load, is tested using CISCA concentrated load test except it is performed on the actual system understructure rather than with

the panel resting on steel blocks. Testing on understructure evaluates the performance of the system as it will be used once installed. This is important because some materials used to make access floors show little or no visible damage before failing. A panel that fails without warning can be very dangerous in the event that it is overloaded.

Steel and Concrete Mode of Failure



Different materials fail in different ways. The chart below compares steel with concrete, two common materials used in access floor panels. As you can see steel will bend significantly before failing, providing additional warning and safety.

Load Definitions

Yield Point - The Yield point is the load at which permanent damage to the system begins to occur.

Ultimate Load - The maximum load that can be applied to the system without failure or falling through the floor.

Design Load¹ - The safe working load that can be applied to the system determined by choosing the smaller value of the ultimate load divided by a safety factor of two or the yield point.

Safety Factor² - The multiple of the design load to the ultimate load.

	Key Features	ConCore System (Explanation and/or benefit)
Design Features	Panel Construction	Flat steel top sheet welded 156 times to a waffle shape bottom sheet then filled internally with lightweight cement.
	Recycled Content	46% recycled content, Over 14% post-consumer.
	Positive Engagement	Tate's PosiLock® pedestal head positions and retains panels in place without screws.
	Zinc Whiskers	All components of system are zinc whisker free.
	Combustibility*	All components are noncombustible.
	Corner Screws	Screws do not extend below panel underneath. Screws are designed with retention feature.
	Finish Options	Almost unlimited factory laminated finish options. PosiTile® carpet & Integral Trim® edge for HPL.
Performance	Walkability*	Quiet & solid underfoot with a sound transmission of 53 NNIC.
	Safety Factor*	System provides a safety factor greater than two during static point load tests meeting all international standards.
	Overload Protection	System yields gradually for built in safety.
	Panel Strength Options	5 interchangeable panel strengths, meet all the requirements of a modern office building.
	Cutout Strength*	System maintains design load and minimum safety factor strength when cut.
Plenum	Air Leakage*	Straight, die cut panel edges yield low and predictable panel seam air leakage rates.
	Plenum Divider	Attaches to pedestals maintaining underfloor access. Adjustable to meet any width requirement.
	Clean Air Plenum	Painted steel panels with tight seams minimize dust and debris entering the air delivery plenum.
Service & Usability	Industry Commitment	Tate is the oldest and largest manufacturer dedicated solely to the R&D and marketing of access flooring.
	Lifting & Handling	Easy to carry with one hand and can be removed with a suction cup lifter. Panels are 25% lighter than concrete panels.
	Shock Resistance	Fully encapsulated steel shell designed to resist damage when dropped.
	Cracking & Reuse	Steel panels are free from unsightly cracks which improve life cycle and reuse.
	Edge Design	Thin edge design eliminates adhesives from leaking between panels locking them place.
	Ease of Cutting	Steel panel filled with cement cuts without special blades.
	Attaching Walls	Screws and shot-pin can be driven directly into the panel without sacrificing it's integrity

*Independently certified test reports are available upon request.

¹ For more information on design load visit Tate's website and click on Resources / White Papers.

² The UK's PSA MOB PF2 PS/SPU for raised access floors, the Australian Standard AS 4154-1993 for access floors and The European Standard for Access Floors EN 12825:2001 all require a min safety factor based on point load tests.

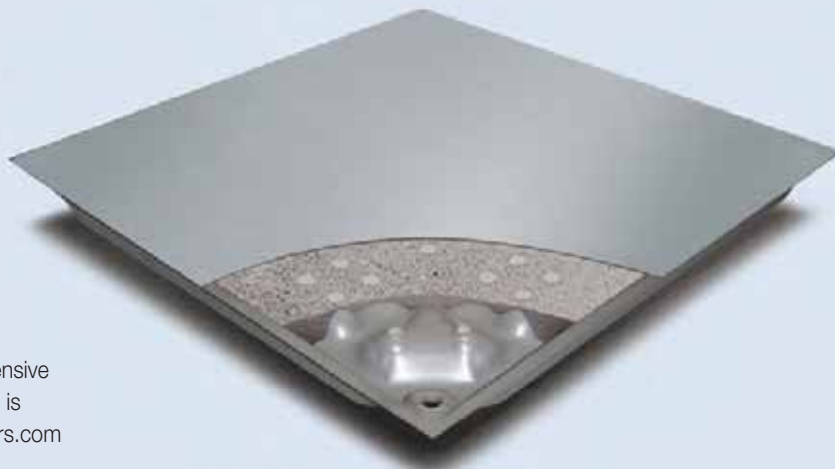
ConCore® Panels

ConCore Access Floor panels are epoxy coated unitized shells consisting of a flat steel top sheet welded to a formed steel bottom sheet filled with a highly controlled mixture of lightweight cement.

Manufactured to exacting tolerances, these non-combustible, rigid, solid panels deliver the ultimate in strength, durability, and acoustic performance.

Applications

With five standard load performance grades and an extensive selection of understructure supports and floor finishes, it is recommended that you visit our website: tateaccessfloors.com for further information on product details, finish options, architectural details, system specification, and selecting the proper panel to meet the needs of your specific application.



Library: Champaign Public Library, Champaign, IL, 122,000 ft²



Owner Occupied: First Canadian Title, Oakville, ON, 30,000 ft²

ConCore® Performance Selection Chart

System Performance Criteria* (Tested on Actual Understructure)							
Panel	Understructure	System Weight (lbs/ft ²)	Static Loads		Rolling Loads		Impact Loads (lbs)
			Design Loads ¹ (lbs)	Safety Factors ² (min 2.0)	10 Passes ³ (lbs)	10,000 Passes (lbs)	
ConCore® 1000	PosiLock®	8.0	1000	PASS	800	600	150
ConCore® 1250	PosiLock®	8.5	1250	PASS	1125	875	150
ConCore® 1500	PosiLock®	9.0	1500	PASS	1250	1000	150
ConCore® 1000	Bolted Stringer	9.0	1000	PASS	800	600	150
ConCore® 1250	Bolted Stringer	10.0	1250	PASS	1000	800	150
ConCore® 1500	Bolted Stringer	10.5	1500	PASS	1250	1000	150
ConCore® 2000	Bolted Stringer	11.5	2000	PASS	1500	1250	150
ConCore® 2500	Bolted Stringer	12.0	2500	PASS	2000	2000	150
ConCore® 3000	Bolted Stringer	13.0	3000	PASS	2700	2400	150

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

1. Design Load is tested using CISCAs Concentrated Load test method on actual understructure instead of steel blocks. Design Load is determined by taking the lesser value of ultimate load divided by two or the point at which permanent damage begins to occur (yield point).

2. Safety factor is the multiple of Design load to the Ultimate Load. International standards and Tate recommend a minimum of 2.

3. Recent design enhancements to the ConCore 1250 panel for PosiLock understructure have increased Rolling Load capacities

All Steel Panels

All Steel Access Floor panels are epoxy coated unitized shells consisting of a flat steel top sheet welded to a formed steel bottom sheet. Manufactured to exacting tolerances, these non-combustible rigid, solid panels deliver the ultimate in strength and durability with the convenience of lightweight construction.



Panel Features

- The safe working load or design load for the panels are equal to the concentrated load
- Lightweight for ease of handling
- Excellent grounding and electrical continuity
- Full range of factory applied finishes
- Completely non-combustible
- Interchangeable with Concore, Perforated, and Grate panels
- Available in 24" and 60cm sizes
- Zinc whisker free

Applications

With three standard load performance grades and complete interchangeability with ConCore, Perforated and Grate airflow panels, these panels coupled with an extensive selection of understructure supports and floor finishes are suitable for a wide range of applications from typical data/computer centers to telecommunication rooms, mission critical facilities, electronic assembly areas, and general purpose equipment applications.



Data Center: Syracuse University, Syracuse, NY, 12,000 ft²

Co-Location Data Centers: Digital Realty, Oakland, CA, 80,000 ft²

All Steel Performance Selection Chart

System Performance Criteria* (Tested on Actual Understructure)							
Panel	Understructure	System Weight (lbs/ft ²)	Static Loads		Rolling Loads		Impact Loads (lbs)
			Design Loads ¹ (lbs)	Safety Factors ² (min 2.0)	10 Passes (lbs)	10,000 Passes (lbs)	
All Steel 1000	Bolted Stringer	6.0	1000	PASS	400	400	150
All Steel 1250	Bolted Stringer	7.0	1250	PASS	500	500	150
All Steel 1500	Bolted Stringer	8.5	1500	PASS	600	600	150

*All tests are performed using CISCA's Recommended Test Procedures for Access Floors with the exception of Design Load

1. Design Load is tested using CISCA's Concentrated Load test method on actual understructure instead of steel blocks. Design Load is determined by taking the lesser value of ultimate load divided by two or the point at which permanent damage begins to occur (yield point).

2. Safety factor is the multiple of Design load to the Ultimate Load. International standards and Tate recommend a minimum of 2.

Understructure Systems

for ConCore and All Steel Systems

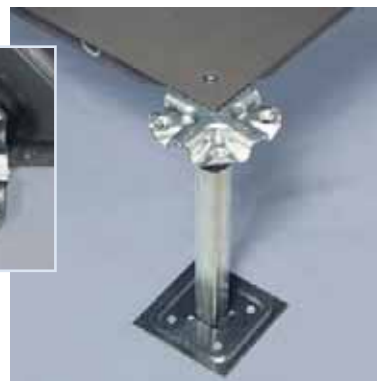
PosiLock®

Understructure Features

- PosiLock® design provides self-engagement and positioning of floor panels.
- Self-capturing fastener remains within the panel - will not get lost.
- Steel pedestal head provides optimum strength.
- Pedestal nut provides anti-vibration and locking features.
- Seismic force-resistant pedestals are available that limit or eliminate the need for special bracing.
- Typical floor heights from 6"-16".



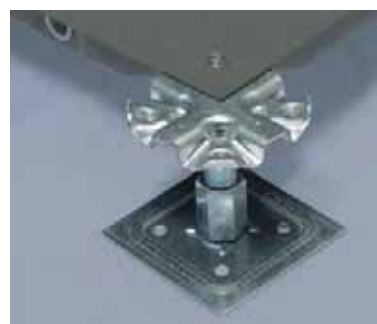
Panel engagement feature viewed from underside



Low Finished Floor Height PosiLock®

Understructure Features

- Available in floor heights from 2½" to 4".
- PosiLock® design provides self-engagement and positioning of floor panels.
- 2½" finished floor height is ideal for renovation applications while providing enough space under the floor to allow for easy cable management.
- Excellent for classroom renovations and the creation of training areas.
- Easily levels uneven floors.

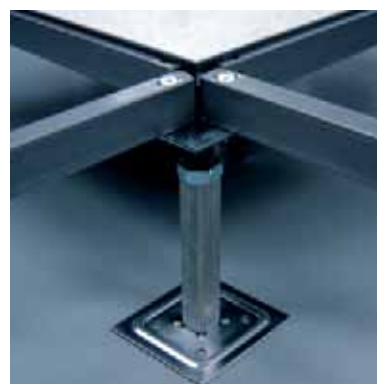


PosiLock® pedestal for low floor height systems

Bolted Stringer

Understructure Features

- Designed for computer rooms, data centers, industrial applications, and heavy rolling load areas.
- Allows floors to be built over 24" high.
- Panels can be gravity-held in understructure for fast removal and replacement.
- Stringers provide lateral resistance to heavy rolling loads and seismic loading.
- Seismic force-resistant pedestals are available that limit or eliminate the need for special bracing.
- All components are free of electro-zinc, a potential source of zinc whiskers.
- Typical floor heights from 12"-36".



Zinc Whisker Free Pedestals

Seismic Pedestals

Understructure Features

- Available with standard and fillet welded base assembly.
- Steel pedestal head provides optimum strength.
- Seismic force-resistant pedestals are available that limit or eliminate the need for special bracing.
- Vertical supports ranging from 16 gauge 7/8" galvanized tubing to Schedule 40 pipe.
- Pedestals can accommodate finished floor heights over 36".
- Easily levels uneven floors.



In-Floor Cooling Devices

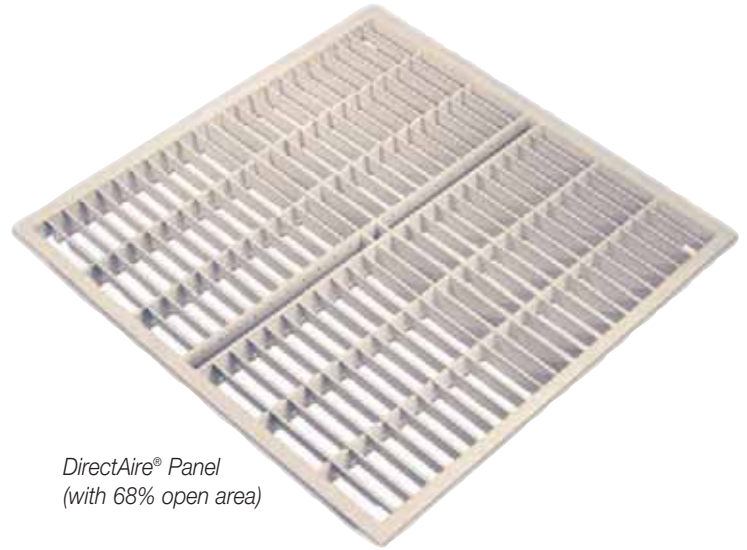
for ConCore and All Steel Systems

DirectAire™

Unlike other grates the DirectAire angles the airflow toward the equipment achieving a **93% Total Air Capture (TAC)** rate by a standard server rack. This means 93% of the airflow delivered through the grate is entering the face of the server rack, providing the highest cooling capacity and energy efficiency of any grate on the market. The elimination of bypass air saves operating expenses in existing facilities and reduces capital expenditures on cooling equipment in new facilities. DirectAire's superior load performance is ideal for retrofit and new construction, easily integrating into your existing raised floor system.

Panel Features

- Directional Air Flow
- Pressure Equalizing Diffusion Blades
- 68% Open Area provides 2,600 CFM @ .1" H2O
- Supports up to 28.5kW per Rack
- 93% Total Air Capture
- 1500 lbs Rolling Load
- 2,000 lbs Design Load
- Safety Factor >2.0



DirectAire® Panel
(with 68% open area)

Applications

The DirectAire Grate is designed to be used interchangeably with ConCore, All Steel, Perforated and GrateAire airflow panels, these panels are made to fit in a 24" stringered system and are suitable for a wide range of high density applications from typical data centers to telecommunication rooms, mission critical facilities, electronic assembly areas, and general purpose equipment applications.



DirectAire™ Performance Chart

DirectAire™ System Performance Criteria* (Tested on Actual Understructure)									
Panel	Understructure	System Weight	Static Loads		Rolling Loads		Impact Loads	CFM (.10" H ₂ O)	Total Air Capture
			Design Loads	Safety Factors	10 Passes	10,000 Passes			
DirectAire®	Bolted Stringer	13.0 lbs/ft ²	2000 lbs	Min. > 2.0	1500 lbs	1500 lbs	150 lbs	2600	93%

*All tests are performed using CISCA's Recommended Test Procedures for Access Floors with the exception of Design Load

1. Design Load is tested using CISCA's Concentrated Load test method on actual understructure instead of steel blocks. Design Load is determined by taking the lesser value of ultimate load divided by two or the point at which permanent damage begins to occur.

2. Safety factor is the factor of Design load that can be divided into the Ultimate Load. International standards recommend a minimum of 2.



SmartAire™

Tate's SmartAire electronically controlled variable-air-volume damper adjusts the amount of air passing through a DirectAire panel to meet the specific needs of the rack it services. Sensors mounted to the front of the rack control the VAV damper to vary the amount of airflow ensuring that proper inlet air temperature is maintained on a rack-by-rack basis. This flexibility can help effectively cool facilities implementing virtualization, cloud computing and idle server shutdown strategies while saving energy.

SmartAire Key Performance Characteristics

- 0-20kW supported IT load per DirectAire/SmartAire pair
- Power disruption fail safe to fully open position
- Installation can be carried out by IT staff
- User programmable set point
- 6 vane damper for large open area
- Damper is infinitely variable from 0-100%
- Viewable Peak Temp for walkthrough check of each rack

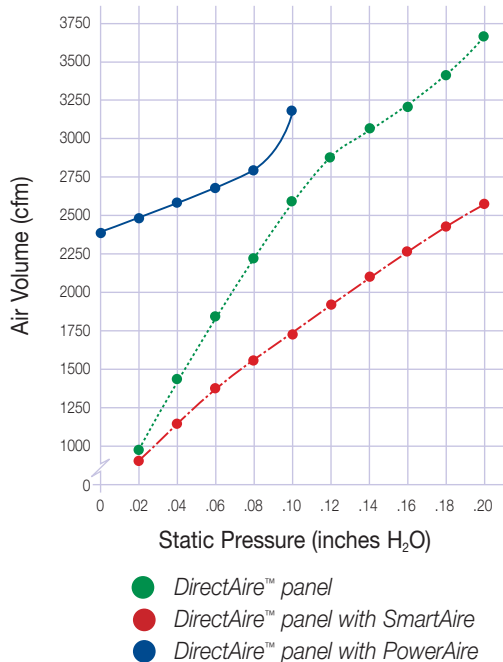
PowerAire™

Tate's PowerAire fan assist module is designed to provide a blast of cooling through an individual airflow panel. Using sensors mounted to the front of the rack the fan will automatically turn on when conditions require additional cooling. Equipped with a variable speed fan drive the fan can be throttled up or down based on the heat load requirements. This powerful solution is ideal for solving the toughest hot spots in a data center.

PowerAire Key Performance Characteristics

- 0-24.8kW supported IT load per DirectAire/PowerAire @ .1 H2O
- Installation can be carried out by IT staff
- System controls to peak value of 4 sensors on rack face
- High Precision, Quick Response Temperature Measurement
- User programmable set point
- Fan speed is infinitely variable from 0-100%
- Viewable Peak Temp for walkthrough check of each rack

DirectAire™, SmartAire™ and PowerAire™ Air Flow



Static Pressure (inches H ₂ O)	DirectAire™ Panel Airflow (cfm)		
	DirectAire	w/SmartAire*	w/PowerAire*
0.00	0	0	2390
0.02	976	950	2480
0.04	1431	1189	2573
0.05	1701	1429	-
0.06	1882	1526	2651
0.08	2235	1636	2755
0.10	2618	1737	3206
0.12	2869	1921	
0.14	3058	2100	
0.16	3170	2272	
0.18	3457	2389	
0.20	3681	2581	

*Tested with damper fully open and fan at full throttle

Air Flow Panels

for ConCore and All Steel Systems

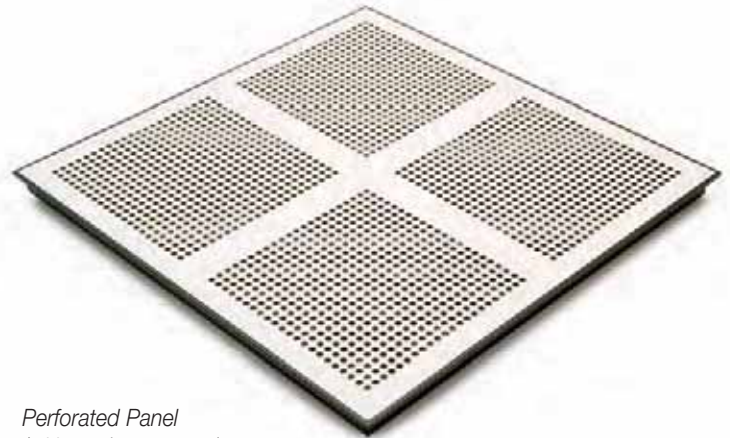
GrateAire® & Perforated Panels

Panel Features

- Perforated steel panels and GrateAire® aluminum panels are compatible with ConCore® and All Steel panels in bolted stringer systems.
- GrateAire® die-cast aluminum panels have 56% unobstructed open area and rolling load capacity equal to that of ConCore® 1250 panels (1000 lbs/800 lbs).
- All panels are available with top surface adjustable damper.
- Steel perforated panels are available with High Pressure Laminate, vinyl and rubber floor coverings.
- GrateAire® aluminum panels are available with an unpainted textured surface or epoxy powder coatings.

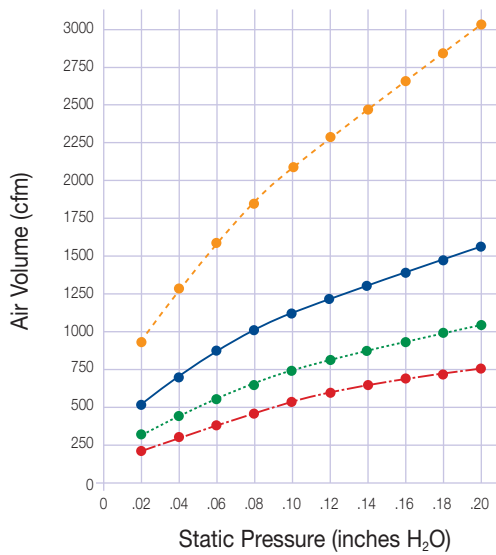


GrateAire® Panel
(with 56% open area)



Perforated Panel
(with 25% open area)

GrateAire® and Perforated Panel Air Flow



- Perforated panel with damper
- Perforated panel without damper
- GrateAire® panel with damper
- GrateAire® panel without damper

Static Pressure (inches H ₂ O)	Airflow (cfm)			
	GrateAire® Panel		Perforated Panel	
	w/o damper	w/damper*	w/o damper	w/damper*
0.02	916	504	332	237
0.04	1320	712	476	328
0.05	1468	792	532	366
0.06	1608	876	584	402
0.08	1860	1008	666	461
0.10	2096	1128	746	515
0.12	2292	1232	818	582
0.14	2484	1332	886	620
0.16	2684	1416	944	669
0.18	2848	1496	990	699
0.20	3024	1580	1050	756

*Tested with damper fully open



Federal Government: United States Census Bureau, Suitland, MD, 1,000,000 ft²



Renovation: Christman Headquarters, Lansing, MI, 20,000 ft²

Woodcore Panels

Woodcore panels consist of high density composite wood core glued to and encased in hot dipped galvanized formed steel sheets eliminating the risk of zinc whiskers. These panels are ULC Listed for flame spread and smoke development and provide excellent rigidity, durability, and acoustic performance.

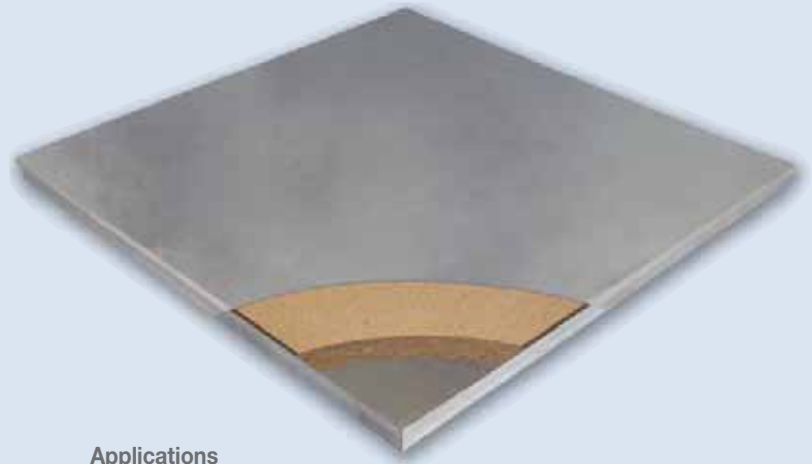


Tate's Woodcore panels and components are made in Canada.



Panel Features

- **NEW!** Mechanically attached air seal gasket available.
- FSC Certified woodcore & FSC Certified woodcore with no added urea formaldehyde are available upon request.
- High strength to weight performance.
- Full range of factory laminated finishes.
- Finishes available with Integral Trim® edge.
- Internally grounded.
- Excellent rolling load performance.
- Excellent acoustics



Applications

Woodcore panels are available with several understructure support systems and numerous finishes. Fully interchangeable steel perforated and die cast aluminum grates are also available. Together they meet needs of a wide range of applications from office environments to equipment applications such as data centers, telecommunication, and mission critical facilities.



Owner Occupied: ABSA, Edmonton, AB, 21,500 ft²



Government: Calgary Water Centre, Calgary, AB, 183,000 ft²

Woodcore Performance Chart

System Performance Criteria* (Tested on Actual Understructure)							
Panel	Understructure	System Weight (lbs/ft ²)	Static Loads		Rolling Loads		Impact Loads (lbs)
			Design Loads (lbs)	Safety Factors (min 2.0)	10 Passes (lbs)	10,000 Passes (lbs)	
WC5000	CornerLock	6.9	1000	PASS	1000	700	150
WC5000	Snap-Tite/Bolt-Tite	7.4	1000	PASS	1000	700	150
WC5000	Heavy Duty Stringer	7.6	1250	PASS	1250	875	150
WC6000	Heavy Duty Stringer	8.3	1500	PASS	1500	1050	150

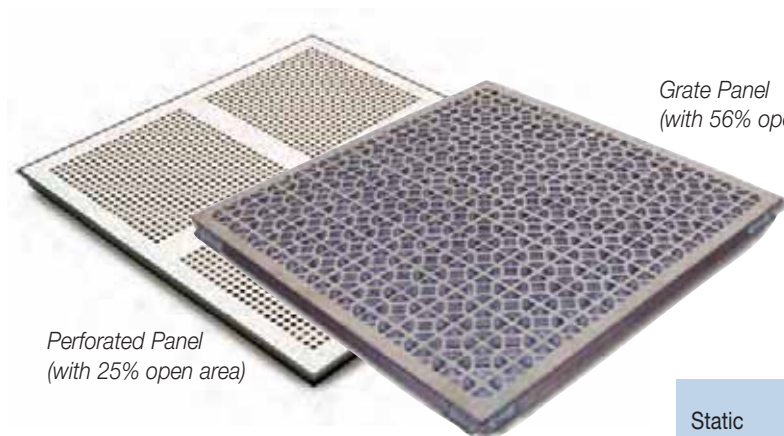
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2. Safety factor is the multiple of Design load to the Ultimate Load. International standards and Tate recommend a minimum of 2.

Air Flow Panel & Understructure

for Woodcore System



Perforated Panel
(with 25% open area)

Grate Panel
(with 56% open area)

Perforated Panel

- Available with a wide selection of conductive and static dissipative coverings.
- Available with top surface adjustable damper.
- Interchangeable with laminated woodcore panels in a stringer system
- Class A flame spread rating.
- Epoxy paint finish.

Grate Panel

- Grate is made of die cast aluminum.
- Interchangeable with laminated woodcore panels in a stringered system.
- Available with conductive epoxy powder coat finish.

Static Pressure (inches H ₂ O)	Airflow (cfm)			
	GrateAire® Panel		Perforated Panel	
	w/o damper	w/damper*	w/o damper	w/damper*
0.02	916	504	332	237
0.04	1320	712	476	328
0.05	1468	792	532	366
0.06	1608	876	584	402
0.08	1860	1008	666	461
0.10	2096	1128	746	515
0.12	2292	1232	818	582
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0.16	2684	1416	944	669
0.18	2848	1496	990	699
0.20	3024	1580	1050	756

*Tested with damper fully open

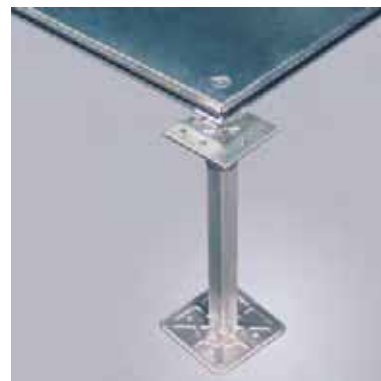
Understructure



Snap-Tite and Bolt-Tite Stringer
understructure system used primarily for gravity held panels with Integral Trim® edge in computer room, equipment room, or MPI/Laboratory environment. This system allows for quick and easy access to the underfloor area.



Heavy Duty Stringer
The heavy duty stringer is designed for installations requiring additional design and rolling load capacities. Panels are gravity-held in the understructure for fast removal and replacement.



Cornerlock
understructure system with the air seal gasket mechanically attached to the panel. Used primarily for office environments with modular carpet tile.

Aluminum Panel Floor Systems

Floating Floors® by Tate

Available in two strengths - FF1250 and FF3000

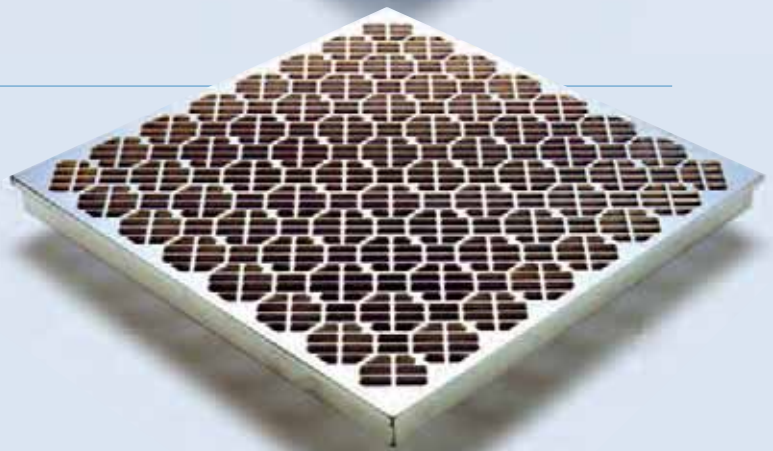
Solid Panel

- Die Cast aluminum panels meet class A fire rating.
- Available with a wide selection of conductive and static dissipative coverings or coatings.
- Contains no ferrous materials to disrupt magnetic fields.
- Panel-to-pedestal contact ensures continuous conductivity.
- Excellent rolling load performance.
- Lightweight for ease of handling.
- Conductive gasket ensures continuous conductivity.



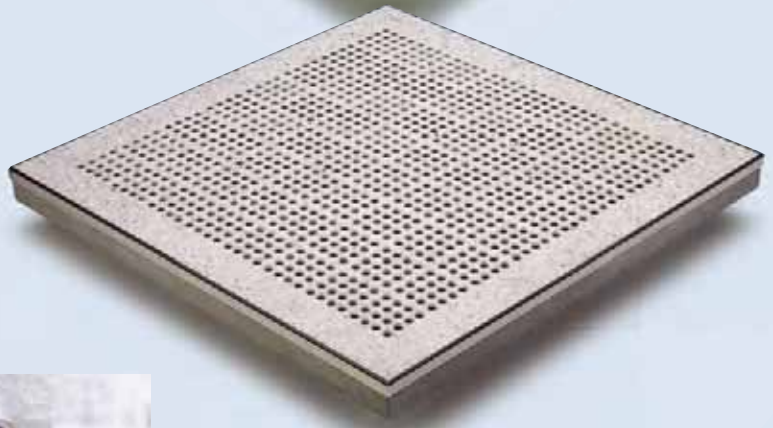
Grate

- Designed to provide superior air flow.
- Unique octagonal design reduces rolling load vibrations.
- Fully interchangeable with FF1250 and FF3000 panels.
- A damper can be used to regulate airflow.
- Available in a variety of coatings.



Perforated Panel

- Perforated panels provide optimum laminar airflow, without turbulence.
- Optional chamfered perforations provide superior particulate control with up to 20% increase in airflow.
- Several perforated panel patterns from which to choose.



Floating Floors Performance Selection Chart

System Performance Criteria* (Tested on Actual Understructure)							
Panel	Understructure	System Weight (lbs/ft ²)	Static Loads		Rolling Loads (lbs)		Impact Loads (lbs)
			Design Loads* (lbs)	Safety Factors* (min 2.0)	10 Passes (lbs)	10,000 Passes (lbs)	
FF 1250 Solid Panels	All	6.50	1250	Pass	1000	1000	150
FF 1250 Perforated Panels	All	6.25	1250	Pass	1000	1000	100
FF1250 Grates	All	7.25	1250	Pass	1000	1000	150
FF 3000 Solid Panels	All	7.60	2250	Pass	2000	2000	200
FF 3000 Perforated Panels	All	7.40	2000	Pass	1500	2000	100

*All tests are performed using CISCA's Recommended Test Procedures for Access Floors with the exception of Design Load

1. Design Load is tested using CISCA's Concentrated Load test method on actual understructure instead of steel blocks. Design Load is determined by taking the lesser value of ultimate load divided by two or the point at which permanent damage begins to occur (yield point).
2. Safety factor is the multiple of Design load to the Ultimate Load. International standards and Tate recommend a minimum of 2.



Casino: Starlight Casino, Queensborough, BC, 100,000 ft²



Renovation: Engberg Anderson Design Partnership, Milwaukee, WI, 18,800 ft², LEED Gold

Understructure



Stringerless System

Interchangeable Panels

Bolted Stringer System

Design Freedom with Finishes



Options for a Range of Applications

Tate offers a wide variety of factory laminated finishes so you can implement the appropriate look, feel and durability for any application.

Lobbies & Hallways

Open Space & Workstations

Conference & Board Rooms

Executive Offices

Classrooms & Libraries

Mission Critical Facilities

Laboratories & Wet Areas

Restaurants, Cafes & Break Rooms

Gaming Environments

Call Centers



Aesthetic Options For Any Application

Finishes

The advantages of access flooring and underfloor service distribution are beneficial to a wide range of building applications - from office to educational, mission critical, casinos and beyond. Just like the buildings themselves, the spaces within them have varied and specific requirements, both functionally and aesthetically. As with conventional flooring, the access floor finish options are limitless.

Selection of the many floor materials and finishes available



Cork



Wood Laminate



Carpet Tile



Linoleum



High Pressure Laminate



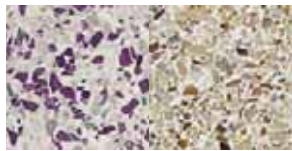
Static Control Vinyl



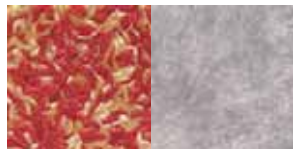
Rubber



Luxury Vinyl



Terrazzo



Freelay Hard Surfaces



Engineered Hardwood



Finishes Online

There are many different materials, vendors and application methods used to apply finishes on or over access flooring. Tate has comprised an online resource of tested and approved finishes for access floor applications. On the website you will find vendor contact information, application renderings, and product photos to help you select a finish for your educational facility.

To access the finishes section of our website please visit www.tateaccessfloors.com/products/finishes.aspx. If you are interested in using a material or vendor that does not appear on the list or would like a printed finished brochure please contact the Tate Hotline at **800-231-7788** or e-mail tateinfo@tateaccessfloors.com

Stone Tile (Terrazzo)

Terrazzo Stone Tile Features

- Made of a polyester resin, calcium carbonate, glass and marble chips.
- Ground smooth, polished, sealed and routed for a beautiful long lasting finish.
- GEM line uses 36% recycled glass materials.
- Alternative resin filler nearly doubles the recycled content.
- Sealed and laminated in the factory to save time and mess.
- Installs quickly saving time and maintaining accessibility.
- No harsh chemicals required to clean the finish.



For more info on Tate's Terrazzo Stone Finish visit www.tateaccessfloors.com/products/floorazzo.aspx

PosiTile® Carpet

PosiTile® System Features

- 24" PosiTile® carpet tiles with four permanently affixed positioning buttons are quickly positioned on access floor panels for one-to-one fit.
- No sticky adhesive on floor panels when carpet tiles are removed.
- Carpet waste is avoided when floor panels and carpet tiles with matching cutout holes are relocated. No attic stock of carpet required due to planned churn.
- Makes workstation relocation fast and inexpensive.
- PosiTile® is available in a multitude of colors and patterns.
- Available with state-of-the-art static control properties.
- A totally sustainable, cradle to cradle carpet tile product.



For more info or to download a copy of Tate's PosiTile brochure visit www.tateaccessfloors.com/products/positile.aspx

Tate Hardwood

Engineered Hardwood System Features

- Made of a 3.4mm natural wood bonded to 11mm Albasia wood backer
- Sanded smooth and finished with an eco certified botanical oil for a long lasting durable finish
- Factory laminated with no trim edge for monolithic look
- Square sides with top edges beveled
- The backer is made from "compressed" vertical plies of rapidly renewable plantation Albasia.
- Naturally VOC free
- Virtually free of petroleum products and carrying a long potential use has minimized its environmental footprint
- No harsh chemicals required to clean hardwood tile



For more info on Tate's Engineered Hardwood Finish visit www.tateaccessfloors.com/products/tate_hardwood.aspx



*Casino: FireKeepers Casino,
Battlecreek, MI, 107,000 ft²*



*Developer/Multi-Tenant: Cadillac Fairview,
RBC Centre, Toronto, ON, 1,130,000 ft²*

Underfloor Services

A full offering of devices and accessories are available to complete your access floor and underfloor service distribution installation. For more information contact Tate @ 1-800-231-7788 or visit us online to download details and specifications at www.tateaccessfloors.com/products/underfloor_services.aspx.

- Glass & Window Panels
- AirFlow damper
- Air Grilles
- Air Columns
- Brush style grommets
- Fascia Components
- Seismic Pedestals
- Panel Lifters
- Ramp Components
- Step Components
- Wet Area Accessories

Underfloor Air Devices & Accessories

Tate is committed to providing accessory products to aid in the successful design and operation of underfloor air distribution systems. Our research and development efforts have expanded our product offerings and partnerships with other manufacturers to deliver a full range of products to improve performance, installation time and maintenance requirements.



*Active Chilled Beam
for heating and cooling*



*AirArrest® Grommets
Creates an expandable air tight seal
for through wall service distribution*



*Plenum Divider
Attaches to the pedestal for
easy accessibility*



*Automatic
VAV Diffuser*

Passive Diffuser



*Air Tower Unit
Quietly supply's air to the
underfloor plenum*

Underfloor Modular Wiring & Cabling



Power Distribution Module

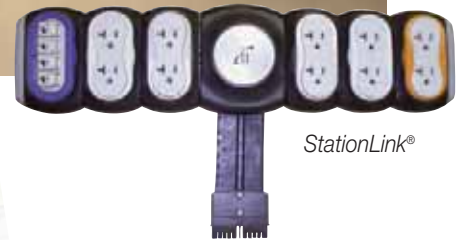


Modular Wiring

The Power Distribution Module (PDM) is a modular power distribution center that can distribute any combination of up to 18 circuits across multiple ports. Pre-wired and tested at the factory, the PDM's are configured to meet any project requirements. PDM's are connected by 'plug and play' extender cables to PVD Servicenters®.

PVD Servicenter® is designed to terminate power wiring and voice data connection at floor level and provide convenient user access to outlets. The box contains a hinged lid with recess for a floor finish insert designed to match surrounding finish for maximum aesthetic appeal. StationLink® quickly mounts to any work surface to provide desktop access to power, voice and data connectivity. Building on the advantages of underfloor service distribution StationLink provides desktop access with the flexibility of a typical floor mounted termination box.

PVD Servicenter and Stationlink termination units are available in several configurations to handle both capacity and finished floor height requirements.



StationLink®



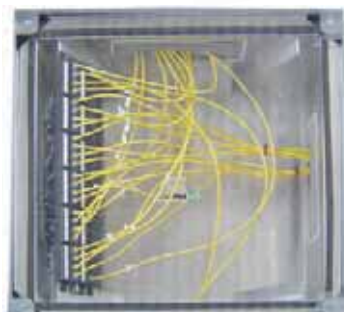
Grommets
Used to seal opening in the access floor for wires and cables.



Plug & Play Cables
Low voltage cables designed to provide voice/data to devices.



Modular Cabling (passive)



Modular Cabling (active)

The passive zone distribution box is a consolidation point that can house up to 96 cable connections. The consolidation point provides an intermediate connection from the distribution box to the PVD Servicenter.

The active zone distribution box allows for a major reduction in the amount of horizontal cable by bringing fiber into the box and then exiting with short run copper cable to the PVD Servicenters.

Tate®



Tate Access Floors, Inc.

Corporate Headquarters:

7510 Montevideo Road, Jessup, MD 20794
Tate Hotline: 1-800-231-7788
Tel: 410-799-4200 Fax: 410-799-4207

Production Facilities:

7510 Montevideo Road, Jessup, MD 20794
52 Springvale Road, Red Lion, PA 17356

International Sales & Support Office:

169 Jalan Jurong Kechil
#7-011, Sherwood
Singapore 598669
Tel: 65-6468-1332 Fax: 65-6468-6681

tateglobal.com

tateaccessfloors.com

kingspan.com



Tate Access Floors, Inc.
components are proudly
made in the U.S.A.



Tate ASP Access Floors, Inc.

Canadian Office & Production Facilities:

880 Equestrian Court, Oakville, ON L6L 6L7 Canada
Tate Hotline: 1-800-231-7788
Tel: 905+847-0138 Fax: 905+847-0141

tateasp.com

A member of

