ARCTIC TILE



DESIGNER SNOWMELT SYSTEM



DESCRIPTION

The ARCTIC TILE is a heated composite paver snowmelt system. This structural tile provides a modern appearance, engineered to endure the rigors of high foot traffic areas.

Effortlessly create an energy efficient, snow-free, elegant surface that can be raised on pedestals or placed on most exterior surfaces, suitable for both commercial and residential applications. Transform patios, pathways, stairways, rooftop decks, plazas, terraces, into stylish heated surfaces, enabling year-round use.

ARCTIC TILE is a resilient, heated floor surface that encompasses:

- · vast selection of designer finishes, textures, and color palettes
- resistance to wear, stains, chemicals, impacts and abrasion.
- self-regulating heating cable technology
- tailored heat output to operating environment
- high thermal mass=minimizes heat loss and energy consumption
- cycling capabilities resulting in 25-50% energy use
- automated, manual, and/or remote activation
- load bearing panel
- · anti-slip surfaces

Instead of relying on numerous components and requiring costly extensive labor for installation, ARCTIC TILE is a prefabricated plugand-play systems that is tailor-made to your specifications. Installation is straightforward: just lay the tiles in place, connect them to a power source, and enjoy year-round a durable, chic, snow-free surface.

The available options encompass surfaces, LED/fiber optic lighting, branding, underside cable trays, and a wide array of additional features.

SPECIFICATIONS

Application	Public spaces, plazas, walkways, stairways, transit platforms, entrances, balconies, rooftop patios, pool decks, rooftop access paths, elevated walkways, plants and facilities, docks, gangways, residential outdoor environments and more. This product is suitable for use on virtually any exterior where the prevention of snow and ice accumulation is necessary.
Anti-Slip	High co-efficient of friction of most surface selections.
Construction materials	Steel, grating, resins, polyurethane.
Cold Lead	Standard nominal length: 15ft (4.5m). Connection is sealed within the polymer. Exit point from any side, top or bottom.
Approvals	VOC compliant, LEED qualified (dependent upon surface choice)
Configuration Capabilities	Sizes are based upon coverage areas.
Controllers	Product matching selected per specification. These systems are modular, scalable, and flexible.
Insulation Fire Rating	Class A fire resistant.
IP Rating	IP67
Resistance	Withstand salt, cleaning solvents, oil, fungus, corrosion, certain chemicals, excellent ultraviolet/weathering characteristics.
Sound Attenuation	Reduces sound transmission.
Surface Installation	Can be in-ground, sand/mortar set, deck substrates, placed in engineered framing, atop pedestals, concrete, etc. ARCTIC TILES can easily be installed atop most surfaces with minimal/zero clearance depending on install type. Connect to power source.
Surface Finishes	Include stone, mosaic, wood, ceramic, porcelain, sintered glass, flake, quartz, metallic, textures, artificial turf and more.
Surface Colors	Standard colors and RAL color matching available
Surface Options	Text, symbols, logos, LED lighting, fiber optic lighting and more.
Options	Penetrations (holes) for gas lines or other, underside cable trays for tidy installs, windup lift tie-down system and more.
Thickness	1-3/8" (35mm) and 1-5/8"(41mm) are the standard. Other thickness can be accommodated from 1.13" (29mm) and up.
Weight (+/-)	1-3/8"(35mm) thickness =13.5 lbs./ft2 (145.3 kg/m2) and 1-5/8"(41mm) thickness =15 lbs./ft2 (161.5 kg/m2)

1

HEATING PERFORMANCE, APPROVALS AND SPECIFICATIONS

	'F				
39.1 °C		Exa	Example of heat output with varied surface finishes		
BXTD		в	x1 – 6mm Sintered Glas	s Mosaic Tile	25mm / 1" Arctic Tile
		A	mbient Temperature		-2.72°C / 27.1°F
	8x2	A	verage Temperature of A	RCTIC TILE	30.0°C / 86.0°F
		B	x2 – Resinous Finish-Fla mbient Temperature	ake & Quartz	25mm / 1" Arctic Tile -2.72°C / 27.1°F
-2.7 °C	OFFER 271	A	verage Temperature of A	RCTIC TILE	34.4°C /93.9°F
Heat output	Customized to project operating onviron	mont			
	Electric heat cable is placed exactly who	nieni.			
Heat Distribution	Electric heat cable is placed exactly when	re needed.	a and anouroa aurf	ana diatributia	~
Thermal Mass	Our prophetary manufacturing process of	inects near to the topside	e and ensures suna	ace distribution	n.
Energy Consumption	Due to high thermal mass significant redu	ively.	porating operating	auirod compo	rad to others
Energy Cycling	Litilizing smart controllors, the system cal	n be officiently evolod fro	perating energy re	thor reculting	in an additional reduction
Energy Cycling	in energy consumption, typically by 25-5	0% of power usage.		thei, resulting	
Control & Monitoring	Optimize power consumption for long-term energy and cost savings. Product matching selected per specification. These				
	systems are modular, scalable, and flexib	ole. These systems offer	wireless functiona	lity, BIM interfa	ace, accessible via an app
	or through conventional control and distr	bution methods.			
Approvals	ARCTIC TILE utilizes self-regulating heat ca	ables approved for use ir	n ordinary and haza	ardous areas. ⁻	Temperature class T3 to
	T6. Approvals include:		,		•
	S .	EM	ī	FOFYLEC	
	c US	APPROVED			
	Canadian Standards Association	l	nternational Elec	ctrochemical Commission	
	Ordinary Locations Hazardous (Classified Locations)	Hazardous (Classified Loc	Locations) LIL 06 004 / EMG 12		
	Class I. Divisions 1 & 2, Groups A. B. C. D	Class I. Division 2. Groups	A. B. C. D	JE 00.004 / 1 MO	12.0004
	Class II, Divisions 1 & 2, Groups E, F, G	Class II, Division 2, Groups	s E, F, G (Certified ANSI/N	FSI B101.1-2009
	Ex eb IIC	Class III, Divisions 1 & 2	(Certified ANSI/N	FSI B101.3-2012
	Ex tb IIIC	Class I, Zone 1 & 2, AEx el	b IIC Gb;		
	Class I, Zone 2 Group IIC, Zn 22 Group IIIC	Zn 21 AEx bt IIIC Db CCE/CMR, GGTN, TIIS, CCE/CSIR, TRCU		Additional Hazardous Approvals: DNV, JIS,	
	Underwriters Laboratories Inc.	Certificate FM12 ATEX 00	14X in		
	Hazardous (Classified Locations)	accordance with the EU A	TEX Directive 94/9/E0	2	
Cold Lead	Cold lead selected per location/specifica	tion requirement.			
Circuit Breaker	Type "C" recommended.				
Supply Voltage	Standard 208-277 Vac (*110-120 also av	ailable)			

WATT DENSITY

Below are typical watt densities provided for estimation purposes. AMS® recommends utilizing intelligent control and monitoring systems, enabling cycling to reduce energy consumption by 25-50% while increasing pieces per circuit without compromising performance.

Watts / ft ²	Watts / m ²
35	390
45	490
60	660
80	855

For more information contact your local Advanced Mat Systems® sales representative. The use of a 30 mA residual current device is required to provide maximum safety and protection from fire. Where design results in higher leakage current, the preferred trip level for adjustable devices is 30 mA above any inherent capacitive leakage characteristic of the heater as specified by the heat trace supplier or alternatively, the next common available trip level for non-adjustable devices, with a maximum of 300 mA. All safety aspects need to be proven.

TYPICAL STRUCTURAL LOADING CAPACITY FOR ARCTIC TILE

Below is typical permissible loading capacity for Arctic Pads.

			Span	
ARCTIC TILE Thickness		29.53" / 750mm	39.38" / 1000mm	49.22" / 1250mm
1 1 2" / 20mm	U	352		
1.15 / 291111	С	433		
1.20" / 25mm	U	626	352	
1.36 / 35000	С	513	385	
1 60" / 11	U	1086	611	391
1.63 / 41mm	С	1337	1003	802

The Arctic Tile's base thickness remains consistent, while the total thickness varies based on the selected surface option.

U = Uniform Load, Psf

C = Concentrated Load at (mid-span). LB per foot Arctic Tile width.

SURFACE OPTIONS

The ARCTIC TILE is transformable, it's essentially a blank canvas that can be any surface you wish. Below is a sampling of the some of the options:





OPTIONS AND ACCESSORIES

Each project being distinctive, we offer a range of options to elevate the space in terms of both style and functionality.

Underside hooks organize cold leads and keep them elevated for pedestal installations.
Standard length is 15ft (4.5m), however the length can be customized.
Solid colors and RAL matching.
Symbols, text, logos and more.
Various sizes and material housing options.
Either LED or fiber optic lighting.
Full range of Bison IP pedestals available
Molded openings with specific openings to accommodate deck-mounted structures, irrigation/gas lines, junction boxes, and other necessary components.
Plugs can be installed on cold leads for easy installation.
Wind uplift tie downs installed on Arctic Tiles
120V Option for smaller installations

ORDERING DETAILS

Get in touch with us, and we would be happy to review your project, provide a proposal, or help construct an engineering specification.

LIMITED WARRANTY

AMS® also offers a 10-year limited product warranty. The warranty is only valid for products purchased and installed within United States and Canada.

CONTROL AND MONITORING

As each package varies in scope and size AMS® offers options for control and monitoring. These systems are modular, scalable, and flexible. The idea - set it and forgot it.

Features can include:

- Automatic snow/ice melting control
- Adjustable temperature setpoints allow for precise control of a wide range of processes.
- Aerial Sensors
- Alarms for excess ground fault current, low load current and temperature
- Alarms indicated with LED panel display and relay contact for remote signaling.
- BIM interface
- IoT Connectivity cellular, WiFi/Ethernet
- Data logging
- Durable enclosures for indoor or outdoor installation and explosion proof
- Fault mode setting which can be set to energize or deenergize the heaters during a sensor fault.
- Fire protection maintains heater operation for use in critical fire protection systems.
- Ground fault protection with manual and automatic test functions
- Real time monitoring and control
- Remote Control
- Temperature sensor for applications (–40°C to 110°C)
- Temperature, load and ground fault current display for accurate adjusting and monitoring
- Self-testing and diagnostics
- And more

Control systems are employed for snow melting, freeze protection, and temperature maintenance. These systems result in significant cost savings over time by reducing energy consumption. For smaller installations, ARCTIC TILES can operate using a straightforward on/off switch as an alternative option.

INSTALLATION INSTRUCTION

The ARCTIC TILE is a fully integrated solution built for a precise fit. This greatly reduces the overall installation time, labor costs, piece count and number of components required.

Complete wiring information and schematics are provided with the product. All electrical installations must be carried out by an approved electrician in compliance with the local electrical requirements and norms. The national electrical code requires ground-fault protection of equipment for each branch circuit supplying electric heating equipment. A complete installation and maintenance manual is tailored and provided for each project including suitable fastening options. Average ARCTIC TILE installation using a pedestal system is 15-20 minutes per piece per man.

Routine housekeeping is simply good practice. Detergent with scrub brushes. Product to be stored and transported flat.

SERVICES

Our experienced personnel are ready to help. We are skilled at conducting services via telephone, email and/or online conferencing with or without video.

Design	From concept to production we supply comprehensive design services, most are free of charge.
Onsite Survey	AMS® trained personnel can be deployed globally, on land or at sea. This service encompasses the precise locations, access points, orientations, electrical placements, obstacle locations, and more. Scheduling is designed to minimize operational disruptions and align with your specific timeline and needs.
Electrical Engineering	We collaborate closely with your engineering team and if needed provide electrical engineering services.
Onsite Installation Support & Supervision	Trained personnel will lend support by directing the installation process. This will certify the installation is in accordance with customer and AMS _® requirements.
Onsite Commissioning	The involves the procedures to check, inspect, adjust, test, document and verify a fully functioning system.
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CONTACT

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100% MADE IN THE USA

