

INDOOR **SNOW**

SNOW 365 DAYS A YEAR. EVERYWHERE.



TECHNOALPIN® INDOOR



Snow Emotions

Magical moments

Nothing electrifies the senses and sparks emotions like encountering fresh snow. Whether young or old, who can resist the desire to reach out and touch it, to form a snowball and feel it's delicious cold tingle.





Instant Happiness

Just breathe in that cold, invigorating air, and feel the rush of energy that creates in us the desire to play and just have fun!

Discover your inner child

Fresh, crisp snow is an open invitation for us to play, to be light hearted, to have our spirits lifted and all our senses awakened. Whether it is the touch of a snowflake as it brushes our eyelashes, the playful forming of a snowball in our hands, the sheer visual delight of our surroundings suddenly transformed into a winter landscape, snow is the kind of magic we simply cannot resist.



Snow Time is Showtime

Making Winter Wonderland Dreams Come True



5 reasons to choose TechnoAlpin

Our snow for your success

1 A Partner for your Snow Business

Our focus lies on the customer's needs in everything we do. Our claim drives us to find the ideal solution for every customer, and we are always willing to go the extra mile. We supply solutions, not just products.

2 Perfect Snow Quality for a Profitable Business

Great snow quality for a successful snow business. We guarantee all our customers and snow enthusiasts have the best snow quality for an authentic snow experience, which is key for a successful snow business.

3 Pursuit of Innovation

We never stop developing our technology, and we keep on innovating. Our energy and persistence in the pursuit of new ideas keep us at the leading edge of worldwide innovation in indoor snow-making.

4 Passion for Snow since 1990

Our enthusiasm for snow is our driving force, and it spurs us on to keep finding new and innovative ways of sharing that passion with others.

5 Worldwide Service

TechnoAlpin operates in more than 50 countries for more than 2.200 customers. Our worldwide service network guarantees reliable after sales service.



Indoor Snow Solutions

We unite nature and technology to create snow at theme parks, amusement parks, shopping locations or hotels. Our solutions range from SnowRooms as small as 20m² up to the world's largest indoor snow parks of 50,000m² and more. We have snow solutions for cold areas below 0°C and even in warm areas up to +25°C hall temperature.

Indoor Ski Resorts

Snow area: up to 50,000 m² and more
Activities: Ski & snowboard, fun activities & playground
System: S6

 **Temperature:** -2°C or lower



Snow Theme Parks

Snow area: up to 5,000 m²
Activities: First skiing experience, fun activities and playground
System: SnowFactory

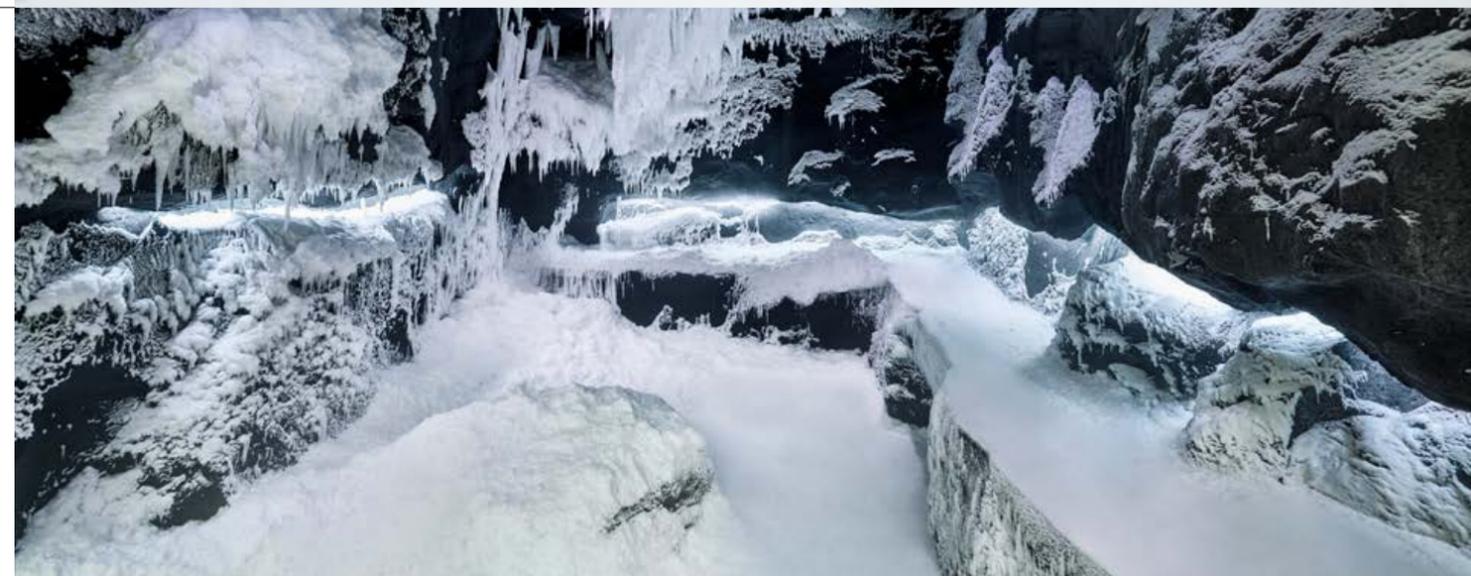
 **Indoor Temperature:** +15° to +20°C



SnowRoom

Snow area: up to 20m²
Activities: Shopping, wellness & spa, lounge & bar
System: EcoSnow

 **Room Temperature:** -10°C



Indoor Ski Resorts

- Snow Area:** up to 50,000 m² and more
- Hall Temperature:** starting from -2°C
- Activities:** ski & snowboard, fun activities & playground
- Snowmaking System:** S6

Winter Wonderland the whole year round

Real snow and deepest winter: An Indoor Snow Park offers an authentic winter experience in any season, regardless of the outside temperature. The snow from TechnoAlpin provides the best conditions for skiing fun and for just playing in the snow.

Best Snow Quality

The snow quality is crucial for the customer experience. The dryer and softer the snow, the more pleasurable it is to play in. TechnoAlpin technology is optimized to create real powder snow, ensuring that customers have the most fun in a pleasant indoor winter climate.

Fresh Snow Every Day

The S6 snow gun generates a fresh new layer of snow every day, which guarantees the snow quality remains constant. The S6 is mounted below the ceiling and is able to cover a large area with fresh snow every day. The snow is made from just water and air.



S6-The snowdome specialist

The production of snow for indoor use calls for a unique approach. A decisive factor for indoor snowmaking is to maintain an enduring quality of snow under the given conditions: snow production at higher temperatures than outdoors, limited fresh air circulation and rather high humidity. For indoor ski resorts, it is possible to generate snow of excellent quality, and with a consistency very close to natural snow.

Powder snow at -2°C

The S6 snowmaking system is patented and developed specifically for the typical indoor situation. It can start snow production at -2°C and operates independently of the humidity level. An integrated heat exchanger ensures there is no negative impact on either the temperature or humidity in the hall. The machine generates its own cold air stream and this results in an immediate crystallization of water particles. The S6, mounted on the ceiling, allows the formation of snow particles, which float down to the surface area.

Optimized cooling power

The S6 features a very smart cooling system, which operates much more efficiently than conventional snow guns. The S6 can begin making snow at -2°C and does not negatively affect the temperature or humidity in the hall. Indeed, it even supports the air conditioning system. Conventional systems generate snow from only -8°C, or even lower temperatures, and in the process, they release additional energy and humidity into the hall, which must be compensated by even more cooling.

SNOWCONTROL

Snowcontrol enables easy operation, monitoring of the status and time program of the whole system

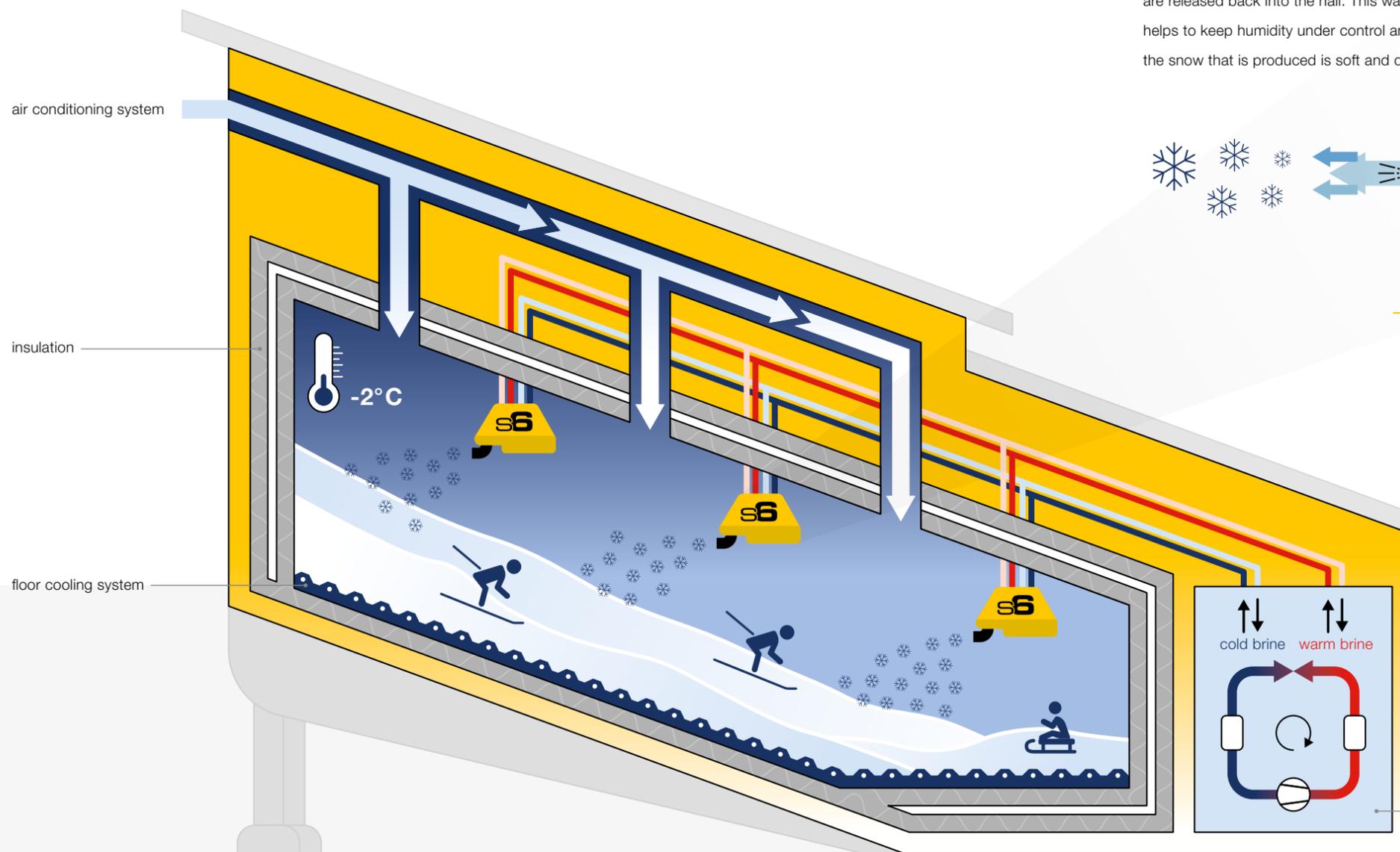
Product advantages



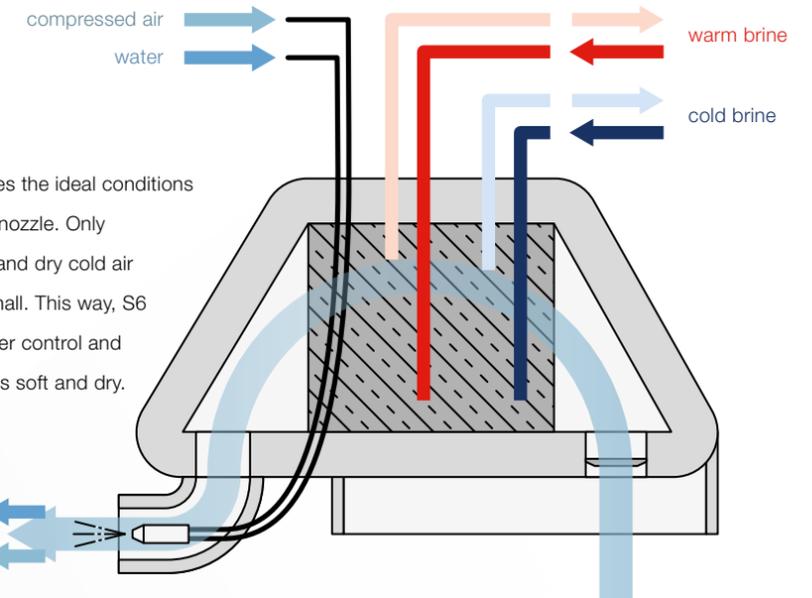
- 1** 365 days powder snow production- starting from already -2°C
- 2** No need for extreme cooling to -8°C
- 3** Minimal impact on the snow dome temperature and air humidity for ideal skiing experience
- 4** Supports air conditioning system with negative temperature output
- 5** Snow making during opening hours possible
- 6** Automated system and intuitive SnowControl software



S6 for Snowdomes: The Snowmaking Process

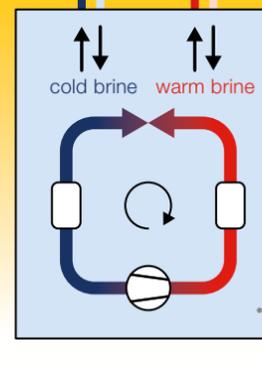


2 Heat exchanger: The cold brine in the heat exchanger cools the air down to up to -20°C. The heat exchanger is regularly defrosted by the warm brine to prevent it from icing up.



3 The **cold air stream** creates the ideal conditions around the patented snow nozzle. Only crystallized snow particles and dry cold air are released back into the hall. This way, S6 helps to keep humidity under control and the snow that is produced is soft and dry.

1 Air intake: the air is taken in and streams through the heat exchanger, guided by the aerodynamic structure of the walls inside the housing. A snow deflector grid prevents snow mist from being taken in.



All S6 units are connected to a dedicated refrigeration cycle provided by the snowdome. That way, all S6 units can work independently from the air conditioning system. Cold is transported to the units, heat is dissipated.

plant room, refrigeration cycle

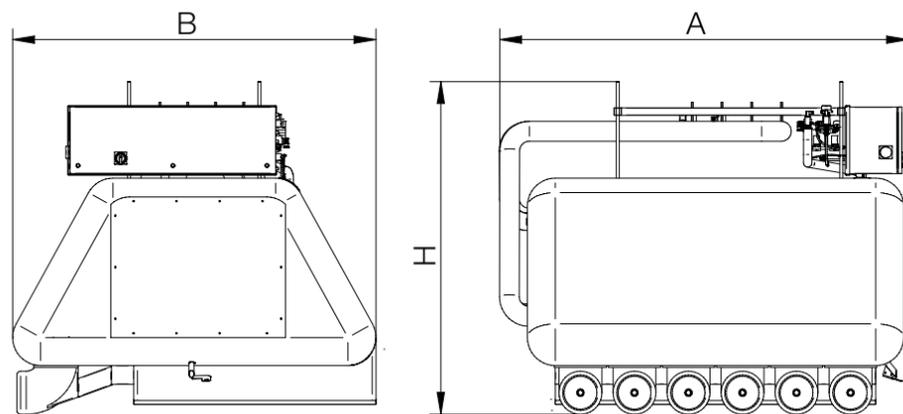
schematic illustration of snowdome



S6 Technical Data

Dimensional data	Length (max.) (A)	mm	2205
	Width (max.) (B)	mm	1980
	Total height (H)	mm	1775
Weights	Total weight- in operation	kg	800
Produced snow volume	Produced snow volume	m ³ /d	up to 30*
Cooling 50% - ethylene glycol	Feed 1 ½" [min]	°C	-27
Defrosting 50% - ethylene glycol	Feed 1" [min]	°C	40
Water	Water quality		Drinking water
	Operating water pressure	bar	6 ÷ 10
Compressed air	Operating air pressure	bar	6 ÷ 10
Electrical characteristics	Operating voltage	VAC	230
	Nominal frequency	Hz	50
	Power consumption [max.]	kW	3
Data management system	Central computer system control		SNOWCONTROL
Installation	Operating temperature	°C	≤ -2
	Installation height [min.]	m	6

*referring to daily snow production cycle, depending on machine settings



Snow Theme Parks

Indoor snow at warm temperatures

Hall Temperature:	+15 to +20°C
Outside Temperature:	up to +35°C
Activities:	first skiing experience, leisure activities, playground
Snow Area:	up to 5,000 m ²
Snowmaking System:	SnowFactory

Today's leading shopping malls offer a combination of entertainment, shopping and food, all in one location. Snow and winter themes are rare and very special attractions. The TechnoAlpin concept for shopping malls no longer requires extreme cooling. The SnowFactory produces snow at temperatures up to +35°C, with a recommended use indoors of temperatures from +15°C to +25°C. Building an indoor snow park becomes much easier, with less investment and maintenance costs. The snow is made from just water, without any additives.



SnowFactory - snow for warm temperatures

Snowmaking at warm temperatures is an entirely different process compared to traditional snowmaking techniques. Conventional snowmaking involves a process where water mist freezes in contact with cold air. With the SnowFactory, the entire refrigeration technology is integrated into the system: The SnowFactory produces its snow in the unit itself, which is then transferred into the hall. There is no need for separate onsite cooling. Air conditioning to approx. 20°C is ideal. The snow has a core temperature of -5°C, and the storage of the cooling energy and the consistency of the flakes slows down the melting process. Another important factor to slow down the melting process is the high quantity of snow.

Depending on the application, the consistency of the flakes can be further refined, for example, to simulate snowfall.

All necessary components for the production of snow are compactly installed inside a 40 ft. shipping container which is resistant to outdoor conditions. Snow production can be commenced immediately after establishing a connection to the electricity and water supply. One SnowFactory is able to produce up to 100m³ daily 24/7 – at outdoor temperatures up to +35°C.

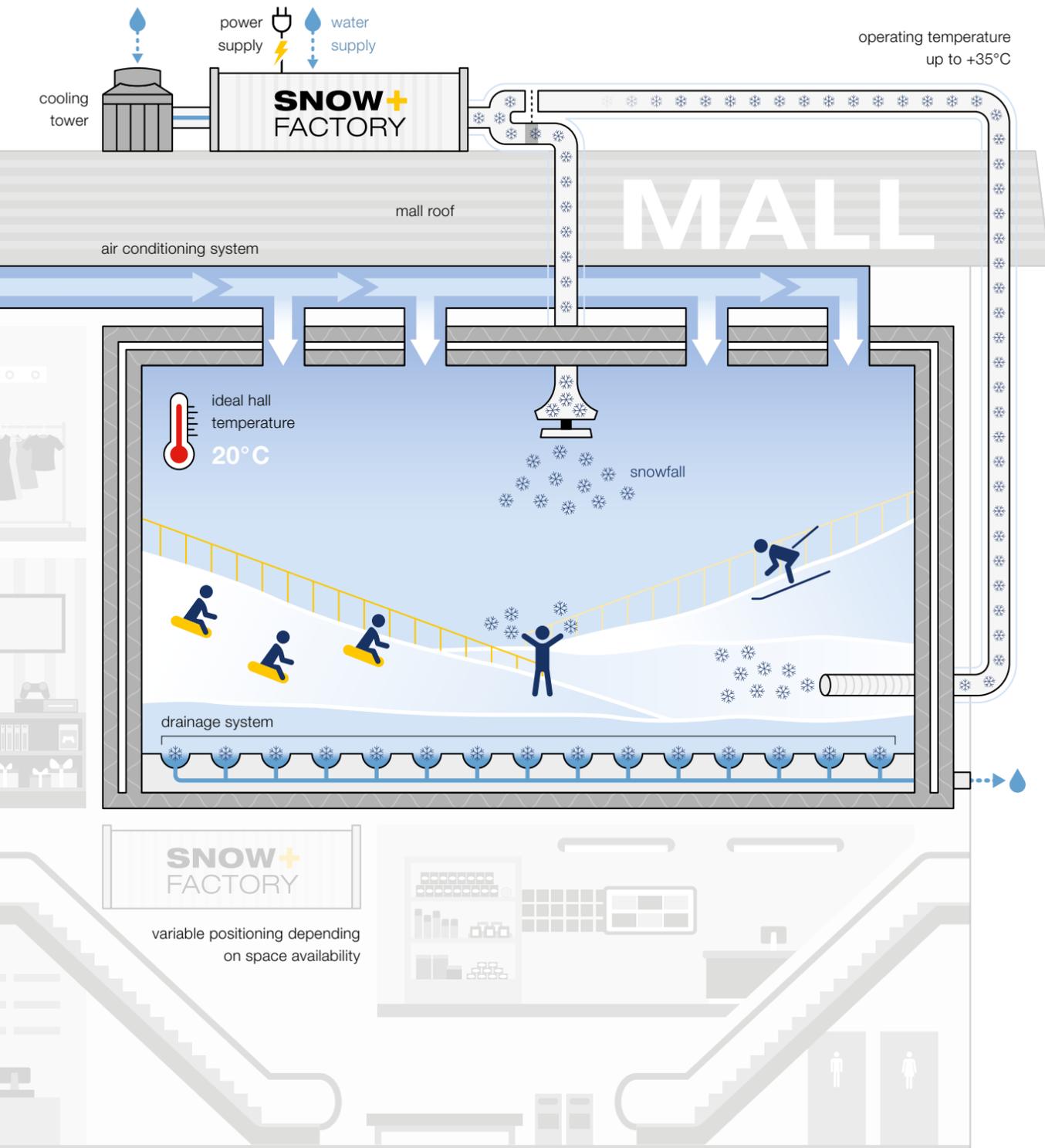
Product Advantages

- 1** Snowmaking at up to 35 °C outside temperature
- 2** New SNOWFALL add-on for augmented snow experience all day
- 3** Unbeaten snow quantity output
- 4** Long lasting and fine snow quality
- 5** Long blowing distance of 150 meters for easy snow coverage
- 6** Modular expandability depending on the needed snow volume



The SnowFactory is delivered as 40feet shipping container

Snowfactory: The Snowmaking Process



1 Water pre-cooling & supply

Water in drinking quality is pre-cooled within the cooling tower and directed inside the container towards the ice-makers, the heart of the process.

2 Refrigeration circuit

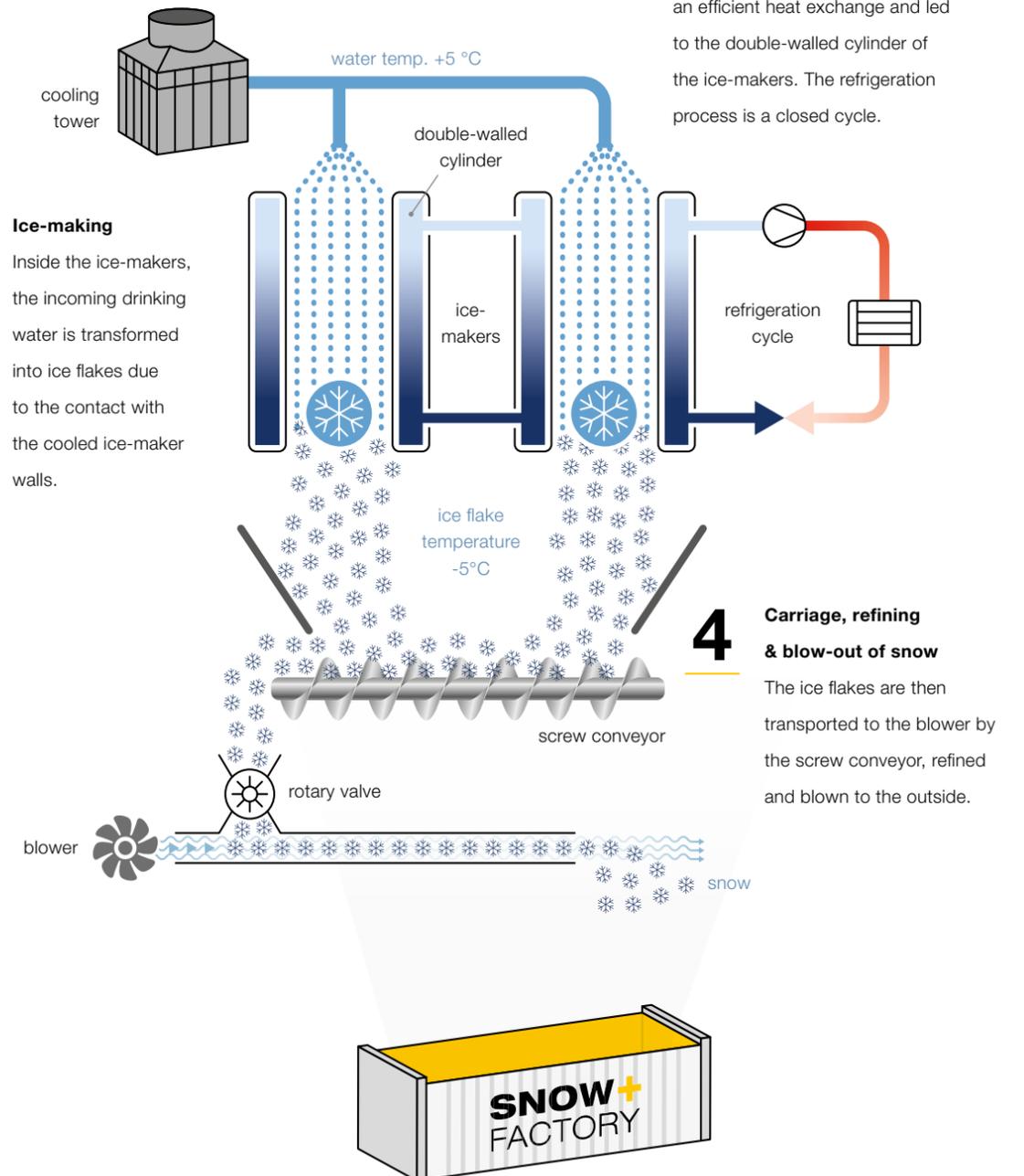
The refrigerant is cooled through an efficient heat exchange and led to the double-walled cylinder of the ice-makers. The refrigeration process is a closed cycle.

3 Ice-making

Inside the ice-makers, the incoming drinking water is transformed into ice flakes due to the contact with the cooled ice-maker walls.

4 Carriage, refining & blow-out of snow

The ice flakes are then transported to the blower by the screw conveyor, refined and blown to the outside.



Snowfall Simulation

Snowfall is the highlight of an indoor snow park and an absolute must-have.

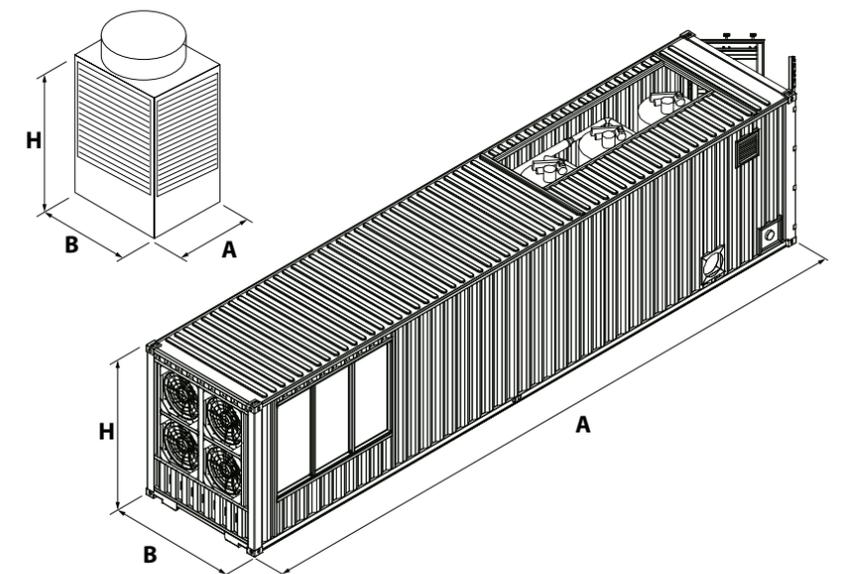
The snowfall feature of the SnowFactory guarantees a continuous snowfall simulation all day. This optional feature is able to cover an area of about 30m².



Data SF100 PLUS - R449A

Dimensional data - container	Length (A)	m	12,2
	Width (B)	m	2,5
	Height (H)	m	2,9
Dimensional data - cooling tower	Length (A)	m	1,9
	Width (B)	m	1,9
	Height (H)	m	3,5
Weights	Weight	kg	19500
Snow volume	Production of snow	m ³ /d	92
	Delivery height (max.)	m	20
	Delivery distance (max.)	m	150
Various	Refrigerant	Type	R449A
	System guide		ATASSplus SnowFactory
Electrical characteristics	Nominal voltage	V	400
	Nominal frequency	Hz	50
	Power requirement	kW	210*
Water	Water consumption for snow production	l/sec	0,5
	Water consumption cooling tower	l/sec	0,5
	Water quality		Drinking water

*For water temperature 30°C and wet bulb temperature air 30°C.



Subject to changes

SnowRoom

- Temperature:** -5° to -10°C
- Activities:** leisure, shopping, wellness
- Snow Area:** 5 - 20 m²
- Snowmaking System:** EcoSnow

Are you ready for the snow moment?

Discovering a winter wonderland, where, and when you least expect it, is as simple as opening the door and stepping into the SnowRoom. Real snow, just like nature intended, there for you to touch and feel, and to gather up in your hands. Feel the spark in your emotions, the irresistible desire to play, and to have fun in your very own snow world.



Hotel Weinegg*****, Appiano, Italy



Hotel Weinegg*****, Appiano, Italy



Hotel Erica ****S, Nova Ponente, Italy



Snow for Luxury Hotels

Snow for the leading spa areas

In addition to its grand architectonic design and innovative character, the SnowRoom is a great product for healthy treatments with cold. The use of cold in health spa treatments is gaining ever more prominence and is very much in vogue. An immersive and gentle cold treatment is conducive to balance and general physical well-being. The SnowRoom is a perfect complement to the hot sauna in luxury hotels, cruise ships and thermal baths.

A Real Innovation

A SnowRoom complete with real powder snow as part of the spa complex is not only a pleasant surprise for wellness guests; it also represents an innovative, value-added feature that makes the facility stand out when compared to the more traditional competition.

Health Advantages

Snow can serve as a complementary treatment for various health issues. This advantage serves as an attractive value-added feature for the overall spa facility and the sauna. Applications with cold, especially when combined with warm treatments, are well known for their health benefits: strengthening of the immune system, training of the blood vessels, pain relief, boosting the metabolism, stress reduction and many more.



Snow Experience for the Store

Innovative retail concepts require new experiences that go beyond the actual product. The concept of multisensory experiences is a new trend in the retail segment. The SnowRoom is an out-of-the-ordinary in-store experience, which enhances the perception of the brand, and increases customer loyalty. The temperature of -10°C and the soft snow allow to test products at real winter conditions. Don't forget the fun factor!

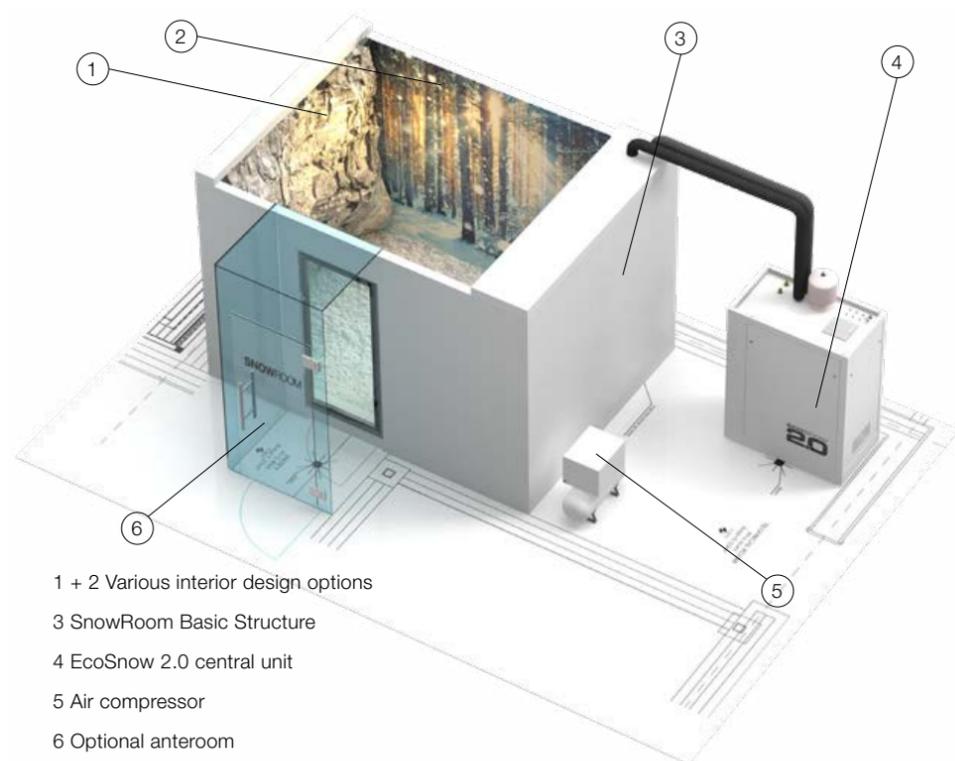
Snow Lounge

A design highlight for a modern lounge or the ultimate experience for restaurants. Pure contrast: a warm, cozy lounge on one side, a snowy winter world on the other, with just a glass panel separating the two.

**The SnowRoom effect:
instant happiness and fun.**



SnowRoom – Turnkey Solution for Small Spaces



- 1 + 2 Various interior design options
- 3 SnowRoom Basic Structure
- 4 EcoSnow 2.0 central unit
- 5 Air compressor
- 6 Optional anteroom

Product Advantages

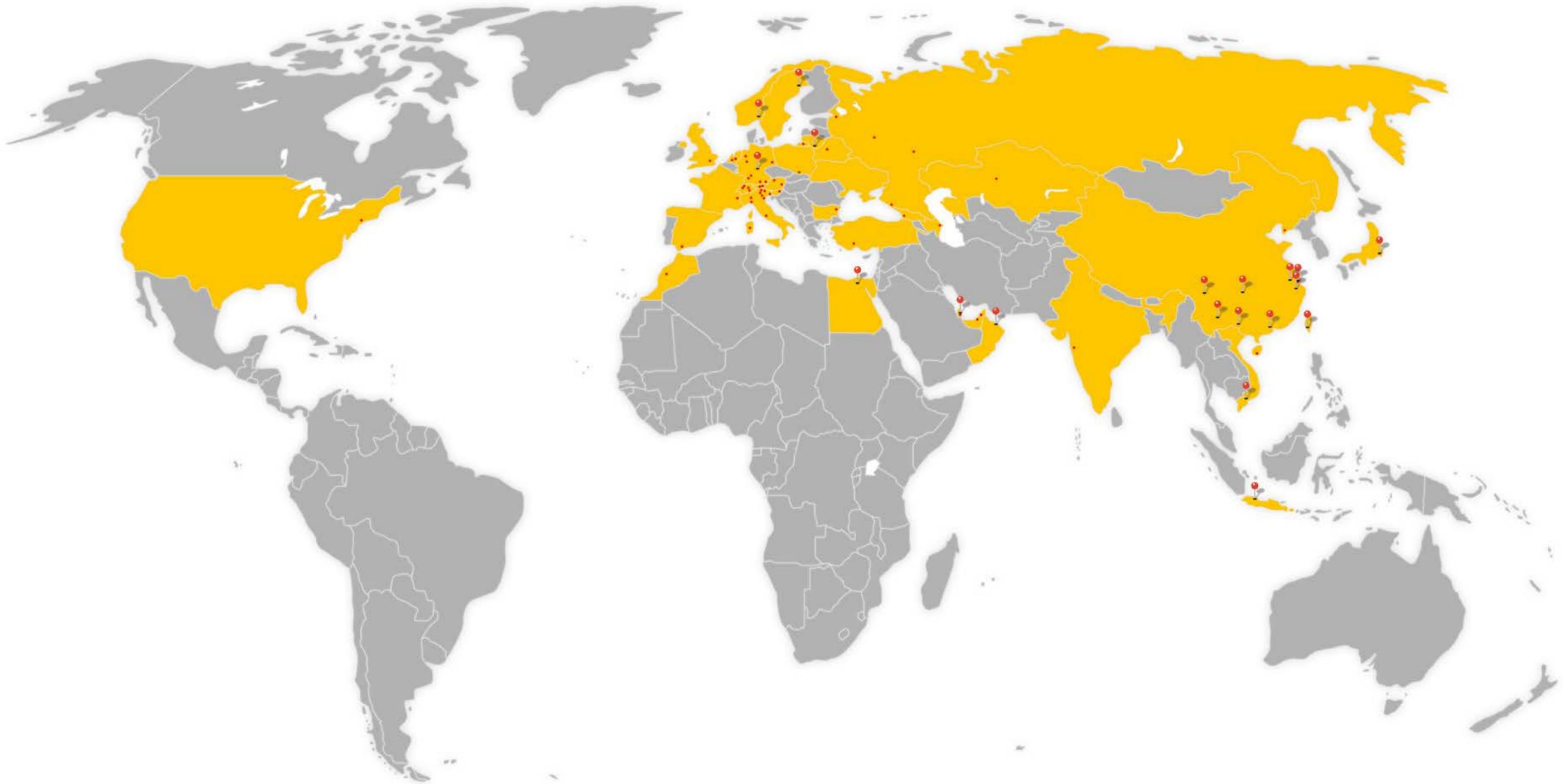
- 1** Snow as attraction for small spaces from 5m² to 20m²
- 2** Turnkey Solution: planning, installation and service from TechnoAlpin only
- 3** Easy Maintenance: easy cleaning of the room, the central unit is easy to access for service and settings
- 4** Unmatched snow quality: best powder snow from TechnoAlpin
- 5** Unlimited possibilities: the modular design can be adapted in size
- 6** Individual options: choice of various design options and accessories like seatings and lighting systems

SnowRoom Technical Data

Temperatures	SnowRoom temperatures (min-max)	From -5 °C -11°C	
Interior	Design	Forest Design, Cave Design	
	available as mono (1 snow nozzle) or dual (2 snow nozzles)	EcoSnow 2.0 mono	EcoSnow 2.0 Dual
EcoSnow 2.0 Multifunction unit	Length	1338 mm	
	Width	740 mm	
	Height	1680 mm	
	Weight	450 kg	
Power features and consumption	Nominal voltage	400 V	
	Nominal frequency	50 Hz	
	Power rating	18 kW (mono)	20 kW (dual)
	Line fuse	20 A (mono)	40 A (dual)
	Average power consumption for cooling cycle	5 kW	
Refrigeration cycle	Refrigerant	R407F	
	Refrigerant filling capacity	2.5 kg	
	CO2 equivalent	4560 kg	
Water for Snow-Making	Water quality	Drinking water	
	Water consumption per snow nozzle (min-max)	Up to 20l/h (mono)	Up to 40 l/h (dual)
	Snow quality	Dry powder snow	
Control	Remote access	Via Ethernet	
	Manual operation	Colour touchscreen 7-inch	
	Timing control	Snow cycles individually programmable	
Plant room for EcoSnow 2.0	Min. space availability	4.5 m ²	
	Max. distance from utility room-SnowRoom	50 m	
	Min. volume of space availability	8.6 m ²	
	Ambient temperatures (min- max)	6 - 35°C	
Optional components	Air compressor		
	Heat exchanger for refrigeration cycle		
	Cooled anteroom (for larger SnowRooms)		

Subject to changes

Indoor Snow References



About TechnoAlpin

Passion for Snowmaking

TechnoAlpin is the worldwide leader for snowmaking systems. TechnoAlpin has been planning and realizing snowmaking systems for ski resorts worldwide since 1990, and also offers solutions for the production of snow indoors. The company holds numerous patents that today set the industry standards in this segment. TechnoAlpin operates in more than 50 countries worldwide for more than 2,200 customers.

A trusted partner

TechnoAlpin has been partners with the International Ski Federation (FIS) since 2006 and delivers first-class snow at numerous winter sports events. Six of the last eight Winter Olympics also had snow produced by TechnoAlpin snow guns, including the 2017 Games in South Korea's Pyeongchang. About 90% of the 20 million ski days in the world's top 15 resorts are thanks to TechnoAlpin's snow.



TechnoAlpin SpA

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