

VIM 100 All Weather Snowmaker

Product Data Sheet

1. Features

The VIM 100 All Weather Snowmaker is capable of producing 200 m³/day of high quality snow, at all ambient temperatures. It is based on IDE’s proven Vacuum Ice Maker (VIM) Technology, which has been operating worldwide for over 20 years. The VIM 100 All Weather Snowmaker secures reliable snow production throughout the entire ski season.

2. Process Description

The VIM 100 is based on IDE's existing vacuum ice making technology. Inside the VIM 100 freezer, water is exposed to deep vacuum. The vacuum forces a small portion of the water to evaporate, while the remaining water freezes and forms a water-snow mixture (slurry). This mixture is pumped out from the freezer to a snow separator (snow gun) that separates the water from the snow crystals. To maintain the deep vacuum in the freezer, the water vapor is deposited on cold plates inside the freezer vessel. The plates are frequently defrosted to maintain continuous heat rejection in the freezer.

3. Value Proposition

<i>Table 1: Value Proposition</i> Feature	Benefits
All weather support	Early site opening Peace of mind in operation (guaranteeing snow)
Unified Product	Agile, off-the-shelf solution
Plug-and-play solution	Easy setup avoiding new infrastructure cost Simple migration from existing snow guns
Mobile Solution	Efficient snow distribution (reduced OPEX)
Modular Solution	Easy deployment and maintenance (reduced OPEX)
Energy efficiency	Reduces OPEX
Environmental friendly	Easy alignment to local regulations Easy maintenance (reduced OPEX)

4. Technical Specifications

<i>Table 2: Technical Specifications Specifications</i>		VIM100
Snowmaking Mass Capacity (at 4.5°C/40°F feed water temperature)		112 ton snow/day
Snowmaking Volumetric Capacity (at 4.5°C/40°F feed water temperature) *1		200 m3/day
Electrical supply		400V / 50Hz / 3 Phase or 480V / 60Hz / 3 Phase
Designed Power Consumption		<170 kW (el. Leistung)
Designed Cooling Capacity		350 kW (Kühlleistung)
Snow Quality:		High Quality Snow
Snow Grain Size		0.5 – 1.0 mm
Snow Density		500 kg/m3
Nominal Feed Water Flow Rate		4.7 m ³ /hr
Recommended Feed Water Temperature range *2		2°C - 6°C
Dimensions:		
VIM Freezer Dimensions LxWxH	1 x 40' HQ container 12.19m x 2.44m x 2.89m	1 x 20' container 6.06m x 2.44m x 2.59m
Snow Gun Dimensions DxH		1.3m x 5m

*1 Considering an average snow density of 500 kg/m3 (31.1 lb/ft3) at the snow concentrator chute outlet.

*2 The VIM can be operated with any given feed water temperature. Each 1°C (1.8°F) increase in the temperature of the feed water reduces the snow production by 1.5%.