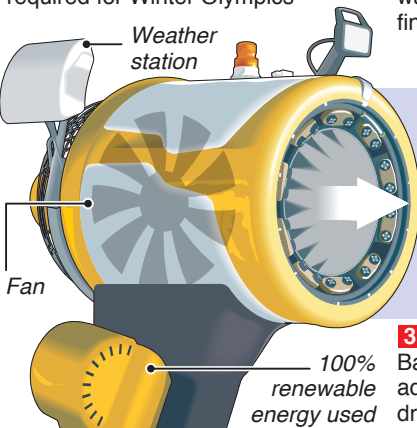


Beijing 2022 run entirely on artificial snow

For the first time at a Winter Olympics, athletes will compete entirely on man-made snow – in a region with an average annual snowfall of only 21cm and a year-round scarcity of water

MAN-MADE SNOW

Estimated 220m litres of water required for Winter Olympics



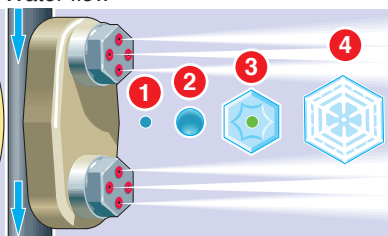
1 Atomisation

High-pressure cold water released as fine droplets

2 Evaporation

Droplets cool and expand with change in pressure

Water flow



3 Nucleation

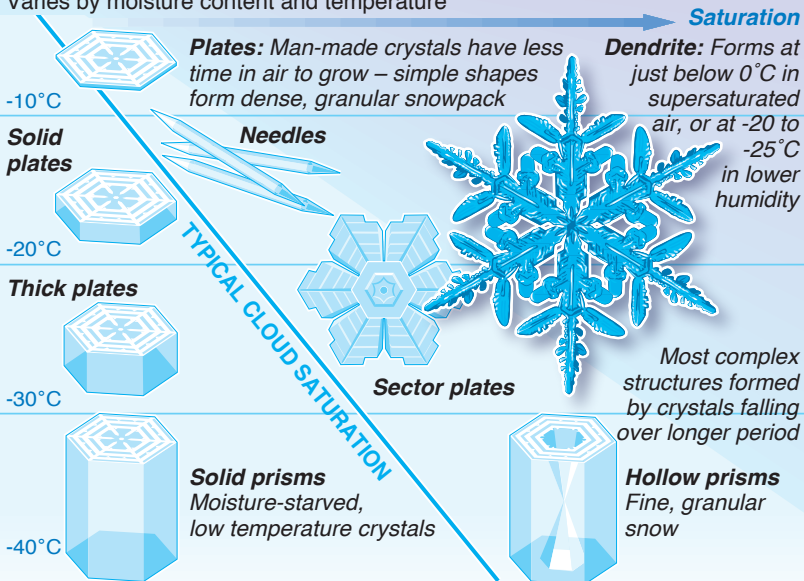
Bacterial fragments added – around which droplets crystallise

4 Convection

Fan cools and disperses crystals

MAN-MADE v NATURAL SNOW CRYSTALS

Varies by moisture content and temperature



Natural powder snow forms in low humidity – extreme cold preserves crystal structure to retain light, fluffy texture

Sources: TechnoAlpin, USGS

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