## Kosciuszko Thredbo SnowPRO 260 All-weather snowmaker project



Plant description General description

**Overview** 



## SnowPRO 260 Component layout and descriptions

- Produced ice outlet, 2 x DN100 pipes, max. 0.7bar pressure. For discharge to the ski slope, max. pipe length 150m/50m elevation on each outlet. Ice particle size 4 – 7mm.
- 2. Housing above ice maker section with room ventilation.
- 3. Ice discharge screw conveyor, double trough, galvanised stee. Delivers ice to the two rotary valves.
- 4. Water collection tank.
- 5. Ice collection hopper, discharge screw at bottom.
- 6. Ice maker, water flows over chilled plates, 2 sections.
- 7. Water circulating pumps, centrifugal type (x2).
- 8. Rotary valves at end of discharge screw, chop and meter ice into low-pressure air conveying system.

- 9. Liquid separator for refrigerant.
- 10. Refrigerant pump (out of view).
- 11. Electrical distribution and control cabinet (with gas monitoring system). Touch screen for operator interface. Also includes controls for heating, lighting and ventilation systems.
- 12. Roof-top air-cooled refrigeration condenser. 8 to 10 electrically powered fans to cool the warm refrigerant. Also contains propylene glycol cooler (see also item 15).
- 13. Low-pressure air blowers (x2) for air conveyance of the produced ice. Each is a 30kW electrically driven roots type blower.
- 14. Refrigeration system compressors (x2). Each is a Bitzer open screw type compressor, model OSKA8581-K with 110kW electric motor. The motors are connected via soft starters to limit start-up demand. This model blower is supported and serviced locally (by Cooma Air Conditioning and Refrigeration).
- 15. Oil cooler for compressor oil. Propylene glycol (PG) specified as safer option compared to the standard specification ethylene glycol system.
- 16. Oil separator for the refrigeration system circuit.

Various valves, filters, pressure switches, sight glasses, safety valves against overpressure, interconnecting piping and other components of the refrigeration circuit are all included. All components are piped in the factory, tested for tightness and insulated.