

refrigeration technology



for artificial skating rinks

JDK refrigeration technology for artificial skating rinks, using ecological refrigerants, has been experiencing ever-growing utilization in smaller sports stadiums and skating rinks at sports and business centres. The technology is based on refrigeration of liquids with the use of new controlling and monitoring systems facilitating creation of variable designs with optimum power consumption and at the same time ensuring safe operation. Thanks to the contractor's own development activities and use of components



made by renowned manufacturers, the systems have been increasingly finding successful applications in the construction of various kinds of ice rinks.

The flow-through refrigeration systems of WTE and WDE types are designed to meet the customer's specifications. One or more compressors are mounted on a common frame, jointly with the controlling switchboard, automatic controls and a tubular or plate heat exchanger. As a rule, the supply contains a pump with the appropriate components for installation of the water circuit.

The compressors are of a hermetic scroll design, or of a semi-hermetic piston or helical design, made by the renowned manufacturers Copeland or Bitzer. In the case of multicompressor units, the lubrication system utilizes static interconnection of oil piping between the individual compressors. The system allows shutting down of one of the compressors.

The control switchboards comprise a power section with the circuit breakers, and a control section ensuring complete control and evaluation of the performance of the refrigeration circuit, pumps, water pressure and regulation of the servo-valve.

The coolant/water heat exchangers are of tubular or plate design, depending on the operating conditions required.

The condensers are of an air-cooled design, situated apart from the refrigeration unit, preferably on the roof of the building. They are designed so as to conform to the operation parameters.

reference

Ice-Skating Stadium in Kralupy

RACK CONDENSING UNIT

Type of Unit

- **WTE-SR4-550**

Cooling Capacity

- **552 kW at $t_e = -18\text{ °C}$, $t_c = +35\text{ °C}$**

Power Input

- **230 kW**

Type of compressors

- **screw compressors Copeland**

Type of Evaporator

- **shell and tube evaporator**

- **cooling of solanky type „R“ from -9 °C to -12 °C**

Used Refrigerant

- **R 404A**

Electronic controlling

- **control switchboard**

- **programmable regulator Adap-Kool**



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