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▲ Schülke is a renowned company in the chemical industry.



▲ The unit is equipped with glycol collection basins.

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Hybrid dry coolers in the chemical industry

Schülke & Mayr GmbH – named only Schülke as of 2007 – is a chemical company founded by the Hamburger merchants Rudolf Schülke and Julius H. Mayr in 1889 in Hamburg-Winterhude. The company is an international leader in the field of hygiene and infection prevention as well as Microbiological Quality Management (MQM) and chemical-technical preservation.

As of 1963, Schülke is based in Norderstedt. The company has been part of the French Air Liquide Group since 1996. Nowadays, mainly disinfectants for surfaces, instruments and the skin are produced. octenisept is a product which has been manufactured and sold by Schülke since its market launch in 1990. The company also produces special additives, e.g. for preserving lubricants, colours and cosmetics, and provides research and service activities.

The *hybrid dry cooler* is used for cooling refrigerating machines, which ensures permanently low operating costs with regard to refrigeration. The advantages of the *hybrid dry cooler* are economic cooling water temperatures achieved by less energy used, a great water saving potential and the possibility of free cooling in line with the sound specifications.

Overview

Business line:	Industrial Refrigeration
Application:	Chemical industry
Country/city:	Germany/Norderstedt
Fluid:	Water/glycol
Product:	JAEGGI HTK

Technical data

Cooler type	HTK 2.4/5.45-2S-P4-CU-SLNF
Number	1 piece
Total heat capacity for this configuration	875 kW

Product side

Fluid	30 % glycol/70 % water
Target fluid temperatures (inlet/outlet)	30 °C / 28 °C
Total of coolers' fluid mass flow	134.3 m ³ /h
Hydraulic connection	Parallel, 4-pass cross counterflow

Air side

Cooler's operating state	Cooler wetted	Cooler dry
Fan speed	100 % nominal capacity	100 % nominal capacity
Air temperature at inlet	34 °C/ 40 % rel. humidity	13.2 °C
Corresponds to wet bulb temperature (inlet)	23 °C	not relevant
Air temperature at outlet	28.4 °C/90 % rel. humidity	29.9 °C

Total wetting water consumption

For air temperature	34 °C/40 % rel. humidity
Evaporative water volume	1.66 m ³ /h

Cooler size/weight

Footprint of a cooler	5.5 m x 2.4 m
Total height of a cooler	3.7 m
Operating weight of a cooler	7.233 kg

The following coolers are integrated into the complete installation

Cooler type	1x HTK 2.4/5.45-2S-P4-CU-SLNF
Controls	Siemens
Cooling capacity in total	875 kW