duotemp®
Kältetechnik in Perfektion

SCHWAKOS® VAPOR CONDENSERS

Clean and dry air for longer service life of your facilities

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In facilities with open liquid systems and thermal treatments, the surrounding air accumulates moisture through the evaporation of water.

As the vapor content increases, so too does the partial pressure inside the plant. This produces steamy water vapor. These vapors load the air, causing corrosion in buildings and shortening the service life of production facilities.

Our Schwako® units condense excess vapors to ensure dry air. The condensate produced can be returned to the system, thus reducing fresh water consumption.

Schwako® units make energy-efficient recirculation systems possible by returning dry, reheated air to the process. As a result, energy consumption is significantly reduced compared to the use of ambient air or fresh air.
Schwako® units are available to suit your requirements – with an air or water-cooled condenser block or with a refrigeration circuit and integrated air or water-cooled refrigerant condenser.

Suitable for diverse applications

- Industrial cleaning technology
- Surface treatment of workpieces
- Drying technology
- Dehumidification of process air
- Biogas dehumidification

SCHWAKOS® WITHOUT REFRIGERATION CIRCUIT

for exhaust air application

Schwako® units without a refrigeration circuit are suitable for inlet vapor temperatures from 40 °C. The compact design allows them to be installed on your machines, cleaning systems or in the immediate vicinity. They can be connected directly to existing exhaust air or recirculation fans. It is also possible to have a version with an integrated vapor fan or fan adapter.

Technical data

- Compact housing
- Vapor duct in stainless steel
- Housing in stainless steel[2] or painted housing[1]
- High-performance pump[1]
- Diaphragm expansion vessel[1]
- Safety valve[1]
- Axial fan[1]
- Switching and control elements with complete wiring
- Standard heat exchanger: Cooper pipe and aluminium fins
- Optional heat exchanger: V4A stainless steel pipes and aluminium fins, epoxy coated

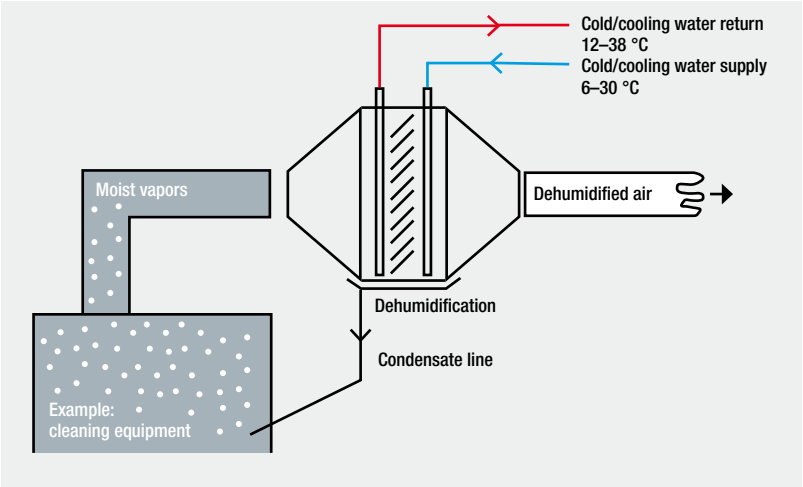
[1] for air-cooled version with water intermediate circuit, series L
[2] for water-cooled version, WTBL series

Options

- Electric reheating coil for vapor drying
- Pressostatically monitored cooling water circuit with refilling device (series L air-cooled)
- ASI/Profibus/Ethernet interface
- Customized housing solutions

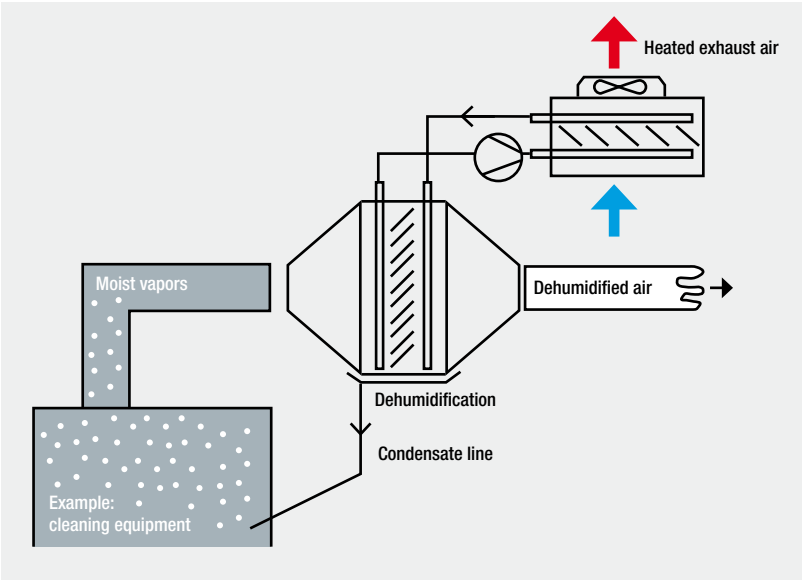
SCHWAKOS® WITHOUT REFRIGERATION CIRCUIT
for exhaust air application

SERIES: **WTBL** – water-cooled



This version is used when cool or cold water is available. A droplet separator and an electric reheating coil can be installed. A heating coil for vapor drying is recommended if reheating surfaces are not or insufficiently available in the facility or if the warm, dry air is used for drying washed parts.

SERIES: **L** – air-cooled



This version is used if no cooling water is available or the required condensing capacities are not very high.

SCHWAKOS® WITH REFRIGERATION CIRCUIT

for recirculating air application

Schwako® units with refrigeration circuit for standard vapor temperatures up to 60 °C work independently of the room temperature in the work halls or the cooling water temperature. The warm side of the refrigeration circuit is used for reheating the cold and dehumidified vapors, in the same way as a heat pump. An electric reheating coil is not required. This type offers greater economic efficiency by reducing operating costs. The systems can be operated in recirculation mode, which means emission-free and more energy efficient. The cooling capacity required to condense the vapors generates more waste heat than can be reused for reheating the vapors. For this reason, an additional water or air-cooled condenser is integrated in the units.

Our Schwako® units with refrigeration circuit are generally equipped with stainless steel heat exchangers and ducts. This prevents leaks in the refrigeration circuit even when using different cleaning agents.

Technical data

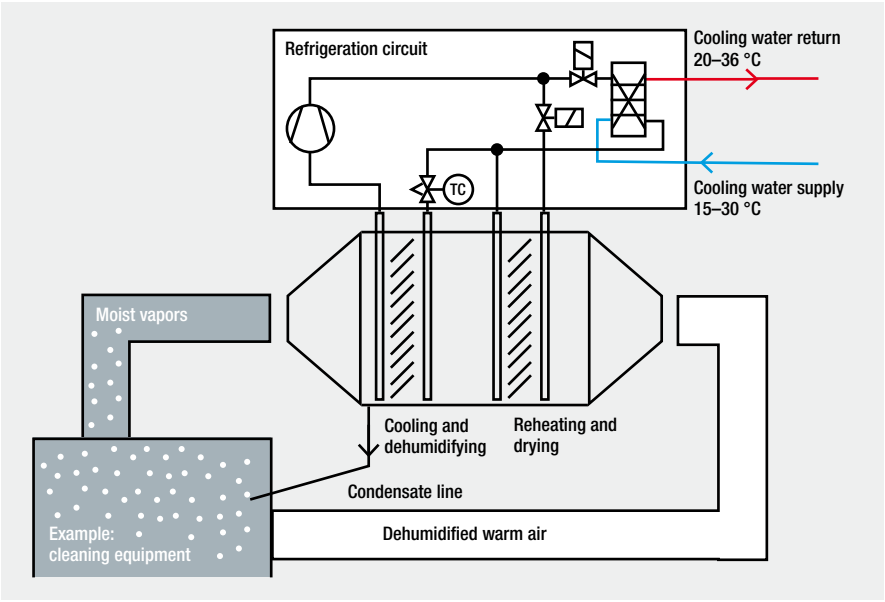
- Full/semi-hermetic compressor, suction gas-cooled
- Stainless steel plate heat exchanger with cooling water controller in water-cooled version
- Axial fan with high-performance heat exchanger for air-cooled version
- Switching and control elements with complete wiring
- Stainless steel reheating coil
- Stainless steel heat exchanger used as evaporator in the vapor duct
- High and low pressure switch
- Thermostatic expansion valve
- Automatic power control

Options

- Auxiliary coil for process water preheating and pre-condensation
- ASI/Profibus/Ethernet interface
- Pre-cooling coil
- Speed-controlled compressors for energy-efficient output adjustment
- Customized housing solutions
- Heat recovery for fresh water

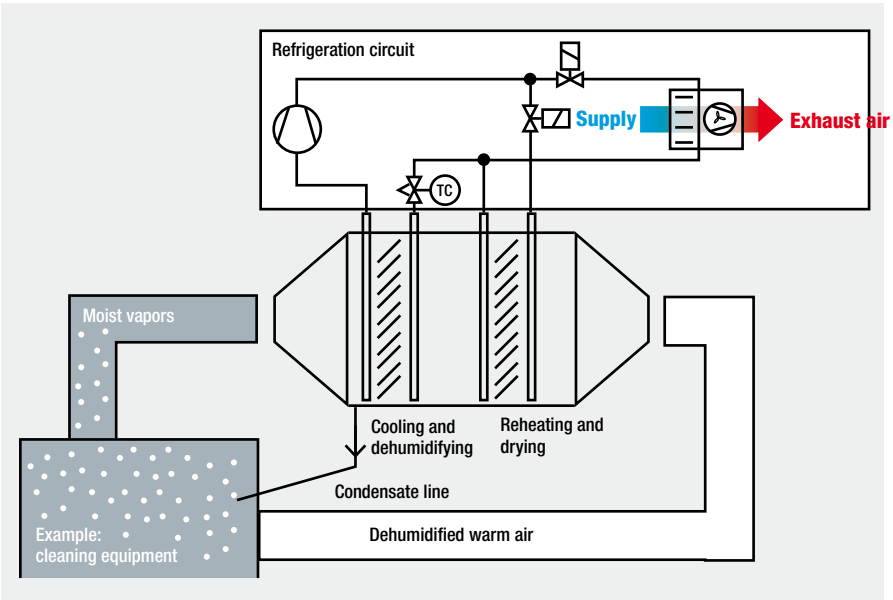
SCHWAKOS® WITH REFRIGERATION CIRCUIT
for exhaust air application

SERIES: **K** – water-cooled



This version is used when cooling water is available.
Advantage over the air-cooled series: compact design, low maintenance and higher energy efficiency.

SERIES: **K** – air-cooled



This version is used when cooling water is not available.

LT duotemp | Taunusstraße 10 | 56377 Nassau | Germany Phone +49 (0)2604 955 50 | Fax +49 (0)2604 955 5150

www.lahntechnik.de