

# Quantity regulation Air-heat exchanger

The controller controls the three-way regulation valve (mounted in the main return pipe), dependent on the measured air temperature. According to the necessary requirement of energy the thermooil goes through the air-heat exchanger, through the three-way regulation valve (A-AB) and back to the main return pipe. The quantity of oil which is not used in the air-heat exchanger goes through the bypass and through the three-way regulation valve (B-AB) also back to the main return pipe. The inlet temperature at the air-heat exchanger is always the highest temperature from the main flow pipe. The temperature difference ( $\Delta T$ ) over the air-heat exchanger can be very big (less thermoil).

- **Variable quantity of thermoil with less exact air temperature**

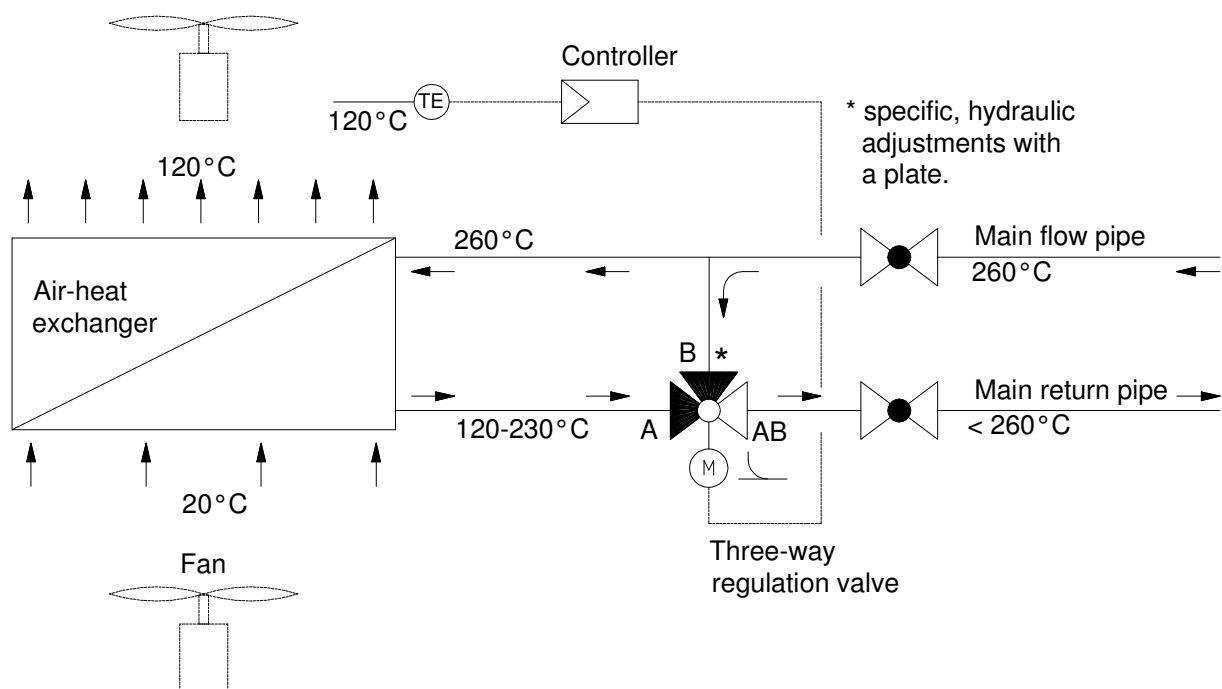
- ⇒ The oil quantity will be adjusted continuously to the necessary air temperature.
- ⇒ There are some big temperature differences in the air-heat exchanger which could create tensions and leakages.

- **Cost-intensive construction**

- ⇒ More and bigger primary pipelines
- ⇒ More and bigger insulation
- ⇒ More mountings

- **Conclusions**

- ⇒ The quantity regulation is a variable less exactly temperature regulation.
- ⇒ The thermoil plant, build by the customer, will be more expensive because there are some extra costs for the pipelines and the insulation.



# Quantity regulation R/I Drawing air-heat exchanger

The primary pipelines should be mounted in a "Tichelmann"- System.

