Project

The Impact of rooftop cooling systems on local climates

Climate change has led to an increased demand for air conditioning. Working on behalf of the city of Zurich, our EBP team examined the question of whether cooling systems on high-rise buildings are suitable for transporting unusable, cooling-related waste heat out of buildings to the ambient air. In particular, we examined whether waste heat can be transported away from urban settings. We also examined the technical, structural, and economic changes this might entail.

Our services

- Examination transporting waste heat from cooling units atop high-rise buildings
- Ascertainment of waste-heat output in relation to rooftop surface area using certain case examples
- Overview of the technical, architectural, structural, and economic ramifications
- Examination of the idea of recirculating of the transported waste heat to building interiors

Client

Building Construction Office, city of Zurich / Energy Commissioner for the city of Zurich

Facts

Period	2020
Project Country	Switzerland

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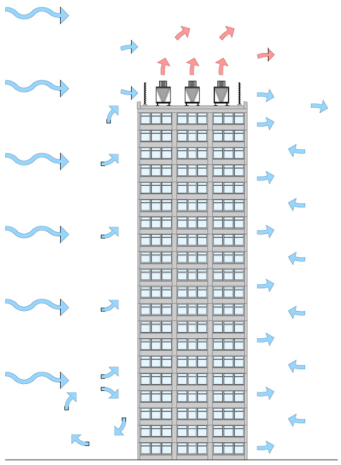
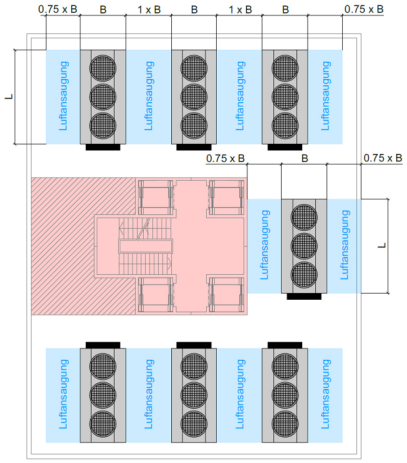
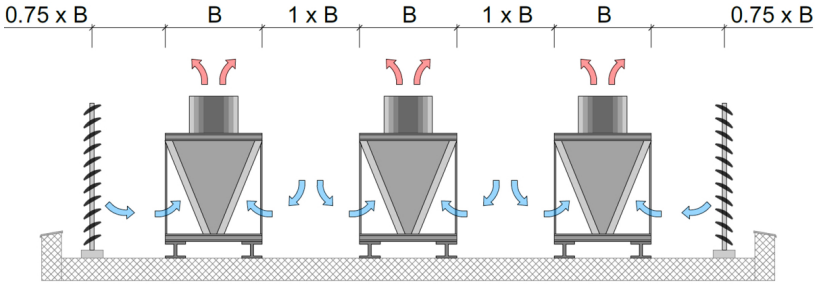


Typical flows of ambient air and waste heat on a high-rise building



Conceptual design of the placement of recooling systems (floor plan)



Concept of cooling-units placement (side view)

Main Image: High-rise buildings with rooftop cooling systems