Building Information Modeling – The Planning Standard of the Future

The intelligent data of AHUs by robatherm now enable integration into subordinate planning levels and thus, more efficient and simpler planning of building projects.

robatherm
the air handling company

Building Information Modeling (BIM) – The Planning Standard of the Future

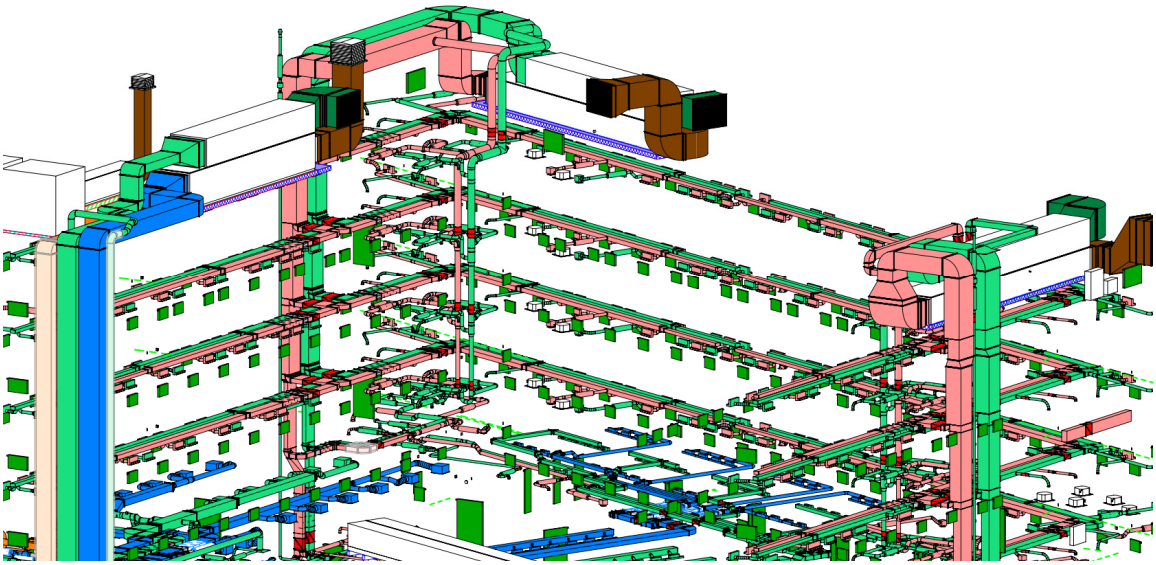
BIM - The building planning's next development phase becomes standard.

In many countries and promoted through regulations, BIM has already been officially defined as a standard planning method. Studies prove that over 71% of the architects, engineers and construction companies in the USA are already implementing BIM.
Meanwhile in Great Britain, BIM is already deemed standard for public tenders. There, in comparison to other renowned projects, particularly major projects were carried out smoothly whereas, time and cost specifications were complied with. Not only due to that, and as of 2020, BIM shall be stipulated as a mandatory planning foundation for public tenders in Germany.

An Integral Planning Process

Through object-oriented, intelligent building models, BIM will provide digital relief during planning by creating an integral process including a standard database. Instead of using many individual drawings, information from different departments will be united in a mutual data model in an interdisciplinary manner.
Besides the geometry, an object's additional technical information , e.g. an air handling unit, is stored in the building model. Relevant data is then available for further planning, construction and subsequent operation of the building.

Based on this building model, both the construction process as well as the later operations can be simulated. Possible errors during the building phase, such as collision issues, can be prevented in advance. The achieved higher level of cost, scheduling and planning security guarantees more efficient planning management and risk containment. This is precisely why BIM is often demanded for major projects.



A Vision Becomes Reality: BIM-Models unite the datasets of differing trades and planning phases and simplify project coordination significantly.

BIM in Air Handling Technology

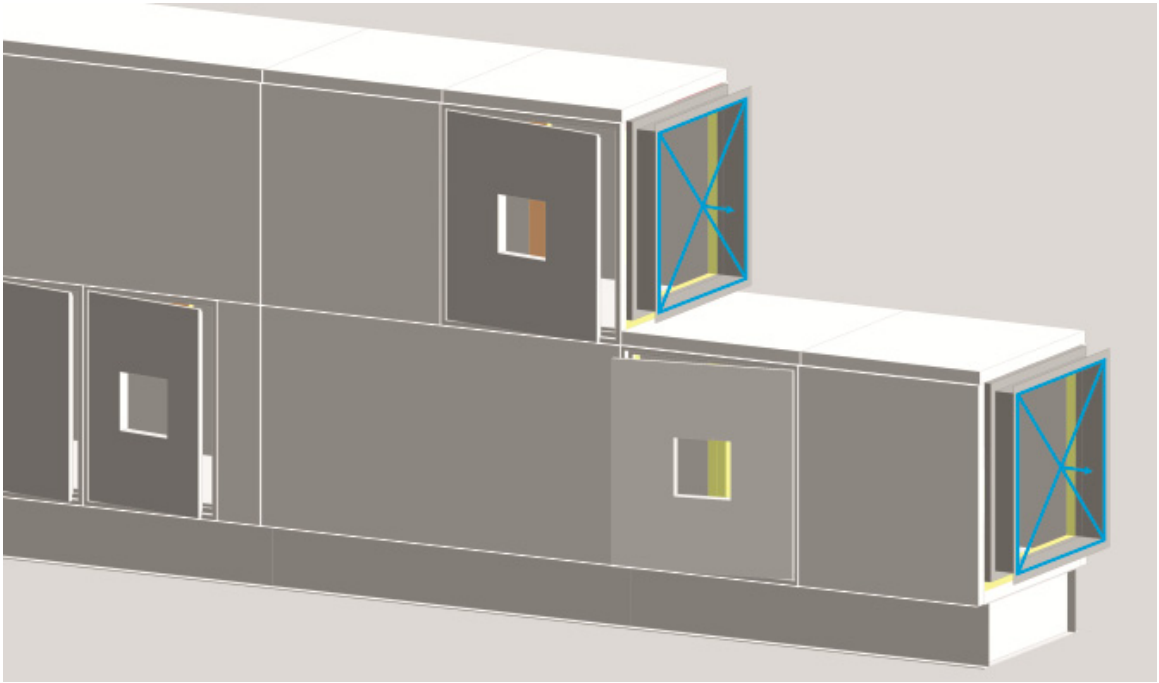
Initially, a 3D-drawing consists of simple lines and dots, which in turn, display the AHUs' geometry. In connection with BIM-datasets, one often speaks of two types of so-called intelligence that lack a simple drawing.

Intelligent Connecting Elements

The first type of intelligence includes "connecting elements". Through these elements it is possible to define digital connecting points such as air duct connections. Beyond that, piping and electrical connections can be determined.
Thus, the AHU can be integrated into the planning software and directly connected to the individual systems. Collision tests of the individual systems and/or the simulation of the building phase can still be carried out during the planning phase.
Alterations in planning with minimal effort are also possible. In the event that the AHU must be relocated due to planning modifications, the individually connected systems are automatically adjusted.

Intelligent Technical Information

The second type of intelligence includes "additional technical information" assigned to the AHU. The information is directly connected to the AHU during planning and are available to all of the trades involved. Based on this information, calculations for further planning can be carried out. During the construction and subsequent operating phase, technical information concerning the AHU is constantly accessible.
This presents the major advantage of accessing relevant information concerning single objects directly within the BIM-model and must not be searched for in separate documentation.



The integration of the AHU into a superordinate planning model including the technical information about the respective AHU opens up entirely new opportunities during planning.

Premium Begins During Planning

For your efficient planning, and upon request, robatherm offers the planned AHUs as BIM-objects. Besides the geometric datasets of a CAD-drawing, you'll also receive the additional intelligence of a BIM-object. The data is made available in a "*.rfa" file format (Autodesk Revit Family) based on VDI 3805.

robatherm connects its datasets with important information concerning the respective AHU. This, for example, includes the unit number to be able to identify the AHU throughout the entire BIM-model. In addition, the BIM-objects comprise information concerning the fans' electrical capacity, which in turn is significant for the building's structural engineering.

Are you interested in intelligent BIM-objects for your Project?

Drop me a line, I'm more than happy to assist you in all inquiries concerning BIM.

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