

AHU Working Group

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Agenda

- Definitions
- Taxonomy
- Components

AHU

- Tag: ahu
- Existing
 - Air Handler Unit which heats and/or cools air.
- Proposal
 - Air Handler Unit: An enclosure with a fan that delivers air to a space via ductwork and performs one or more of the functions of cleaning, heating, cooling, humidifying, dehumidifying, or circulating the air.

MAU

- Tag: mau
- Existing
 - Used with ahu to mark an AHU as a makeup air handling unit which conditions 100% outside air, and no recirculated air.
- Proposal
 - Makeup Air Unit: An air handler unit that deliver **100% outside air, and no recirculated air.**

RTU

- Tag: `rtu`
- Existing (`rooftop`)
 - Used with `ahu` to mark an AHU as a packaged rooftop unit (RTU).
- Proposal
 - Rooftop unit: An AHU that is **weatherized for outdoor use.**
- Questions
 - Are they always unitary?
 - Is this a useful distinction?

FCU

- Tag: fcu
- Existing
 - Fan coil units are unitary heating/cooling assets which use the zone itself for supply air.
- Proposal
 - Fan coil units are a **unitary**, factory-made enclosure with a fan that **recirculates air in a space** and performs one or more of the functions of cleaning, heating, cooling, humidifying, or dehumidifying, the air.
- Questions
 - Can they have an outside air section? Or are they always only recirculating?

Unit Ventilator

- Tag: unitVent
- Existing (uv)
 - Unit ventilators are fan coil units that have **direct access to outside air**.
- Proposal
 - Unit ventilator: An FCU that has direct access to outside air. They are commonly installed in hotel rooms.
- Questions
 - Is this really a sub-category of FCUs? If FCUs are only recirculating air, doesn't this violate its definition?

Proposed Taxonomy

- airHandlingEquip
 - ahu
 - mau
 - rtu
 - fcu
 - unitVent
 - heatPump

Taxonomy Questions

- What is a general term besides airHandlingEquip?
 - Does it encompass or exclude terminal units, radiant systems, etc?
 - What is the distinction? A fan? Upstream equipment? What about fan powered VAVs?
- Is “unitary” the main distinction between ahu and fcu? Should we have a unitary tag?

Missing?

- Should we have a tag indicating a 100% return air unit like `mau` is for outside air? Is this distinction not better accomplished through a qualifying tag on an `ahu` equip, like `chilledWaterCool`?

Component-level models

- From an analytics perspective, component and chamber ordering is often more informative than ahu/rtu/fcu distinctions
- A component ordering system does not necessarily clash with the work above.

Component-level models

- Possible models that include a “stream”
 - Model components as sub-equipment
 - Similar to how ‘fan’, ‘pump’ have been done in the past
 - Grid tag on equipment
 - Other ideas?