Unit Air-conditioning Guidelines for Residential Projects:

1. Capacity:
    a. If FTF height is <= 3.45 m, 1 TR for every 175-200 sq. ft. of carpet area in the room.
        i. 175 sq. ft. if room has direct exposure to east or west
        ii. Else 200 sq. ft.
        iii. In living room, ~175 sq. ft. on account of leakage of cooled air into passage.
    b. If FTF height is > 3.45 m, 1 TR for every 175 sq. ft. of carpet area in the room.
2. Nos: Multiple units are to be considered only if required capacity is > 2.5 TR.
3. AC units to be located in a practical manner such that:
    a. Piping length from Outdoor Unit (ODU) to Indoor Unit (IDU) in minimized. – ideally this should not exceed 4 m and in any circumstances should not exceed 8 m.
    b. Pipes from ODU to IDU are taken through sleeves, rather than below beam, avoiding costs of boxing etc.
    c. All drain pipes are given connected into a water drainage channel/not left open (concern for units used for key common areas where AC units are planned late and attention is not paid to drainage).
    d. As far as possible, piping & cabling are laid on cable tray and not clipped to wall or ceiling.
    e. ODU for ACs must be easily accessible from inside the flat – a person should feel safe in that area and need not step over a wall more than 750 mm high to get to the ODU.
4. If hideaway type AC units are used:
    a. The internal duct/ceiling area within 1 m of the grill should be painted (not left grey behind false ceiling).
    b. Any lights within 1 m of the grill should have a dark colour (black) cap/cover on their internal side to avoid light being reflected and seen through grill.
    c. Separate vents for air delivery and return air should be provided in each room.
    d. Each IDU should have separate air delivery ducts. Only return air ducts can be shared between IDUs.

e. Flexible connection shall be provided between machine and ductwork.
f. The duct must be connected to the grill/ diffuser. The grills must be ordered with the collar for the duct termination.
g. The acoustic and thermal insulation serves different purpose and one doesn't supplement others. Wherever the acoustic insulation is provided inside the duct, thermal insulation must be provided on the outside of the duct.
h. Wherever fibre, mineral or glass wool based insulation is used for the insulation purpose, the edge of the insulation must be taped properly.

5. In case of hi-wall split ACs, the IDU should be chosen in discussion with the Project Design team to ensure aesthetic match.
6. The IR remote control reception panel of the AC should be easily viewable from most parts of the room, so that the remote can function effectively.
7. In high-end and luxury projects, door (most likely sliding) is to be provided to kitchen if the living room is air-conditioned.
8. Following minimum energy efficiency ratings have to be met for all non-window AC's:
    a. Casa & Aspirational: 3 star
    b. Luxury, Hi-end, Supremus & Common Areas of all projects: 4 star