

decentralized cooling

Typically found in multifamily buildings, decentralized systems cool single rooms or apartments.

New York City buildings commonly use three types of decentralized units: window air conditioners, through-wall air conditioners, and packaged terminal air conditioners. All three tend to be inefficient cooling options.

Heat pumps offer a more efficient solution that also provides effective heating during the winter months.

1 Heat Pumps

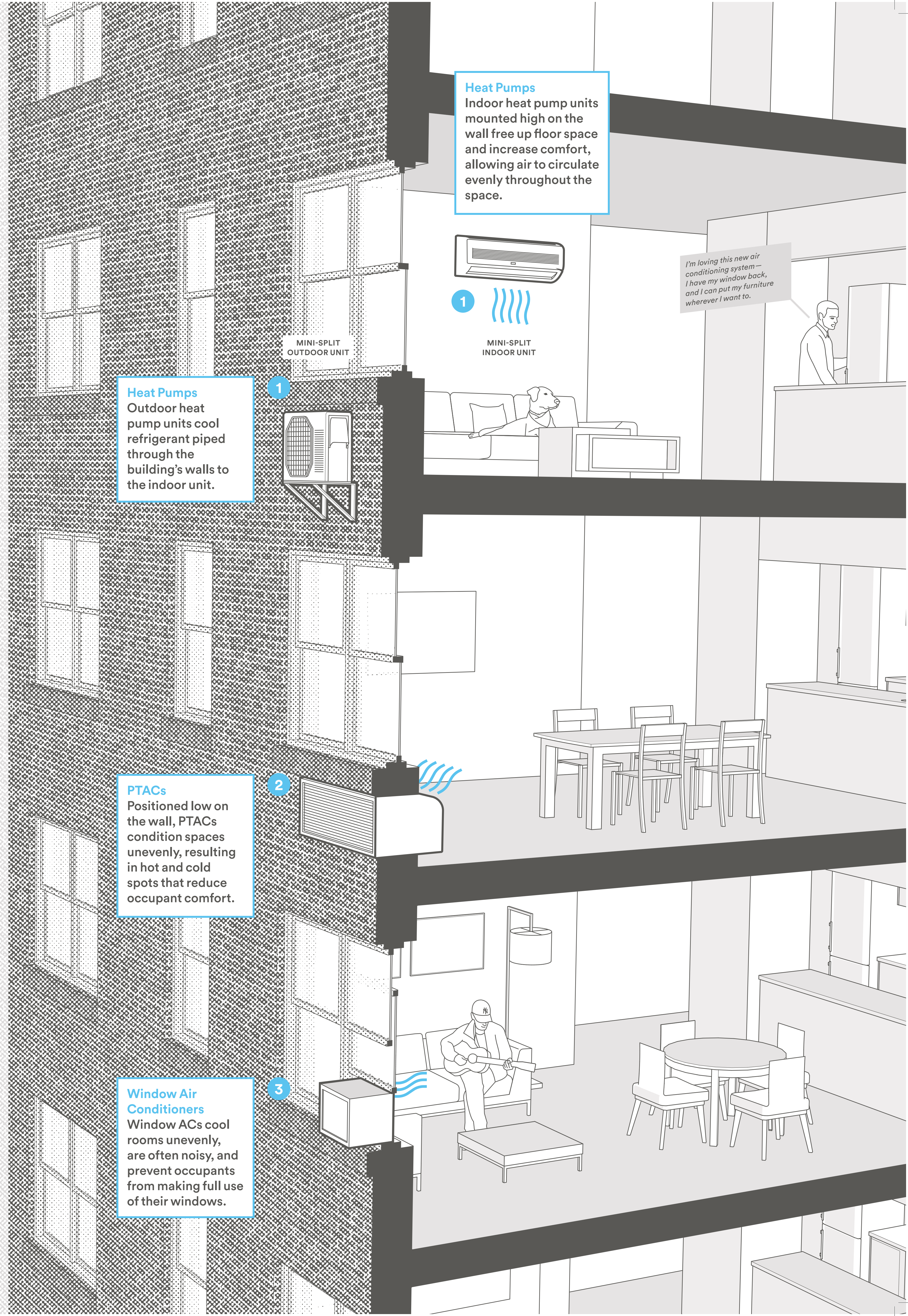
Mini-split systems and other split heat pump systems consist of two compact, ductless components: an outdoor unit connected to an indoor unit via refrigerant lines. This refrigerant piping requires minimal exterior wall penetrations compared to through-wall or packaged terminal air conditioners (PTACs), reducing gaps in the envelope and minimizing heat loss or gain that can cause heating and cooling systems to work overtime.

2 Packaged Terminal Air Conditioners (PTACs)

More common in New York City than in other parts of the country, PTACs consist of a single packaged unit installed in a metal sleeve, typically located beneath windows. Unless properly sealed, these systems allow for air infiltration as well as intrusion of outside pollutants and street noise. To improve efficiency and add heating capability, PTACs can be replaced with Packaged Terminal Heat Pumps (PTHPs) that fit into the existing metal sleeves.

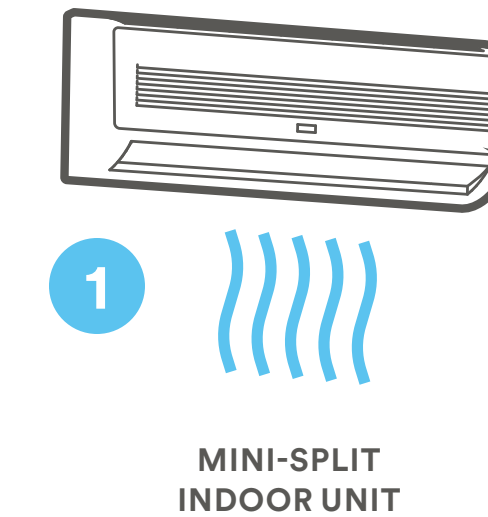
3 Window Air Conditioners (ACs)

Common in older multifamily buildings, window ACs are energy intensive and often improperly sealed, leaving gaps in the building envelope that increase heating and cooling loads and allow air and noise pollution to intrude into occupant spaces.



Heat Pumps

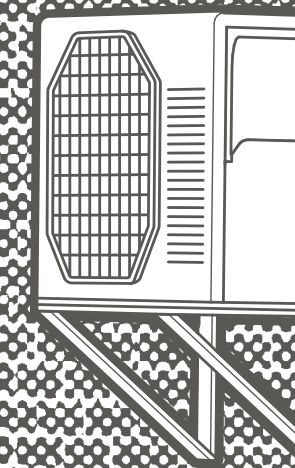
Indoor heat pump units mounted high on the wall free up floor space and increase comfort, allowing air to circulate evenly throughout the space.



Heat Pumps

Outdoor heat pump units cool refrigerant piped through the building's walls to the indoor unit.

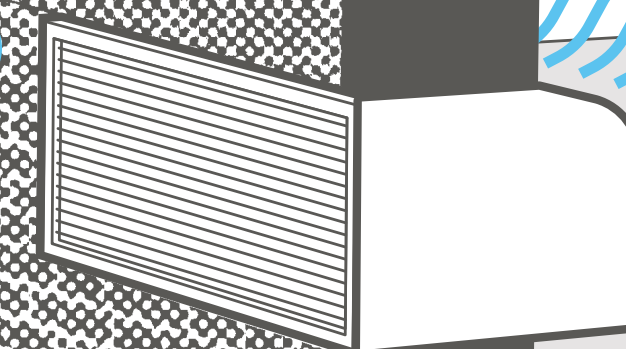
MINI-SPLIT
OUTDOOR UNIT



PTACs

Positioned low on the wall, PTACs condition spaces unevenly, resulting in hot and cold spots that reduce occupant comfort.

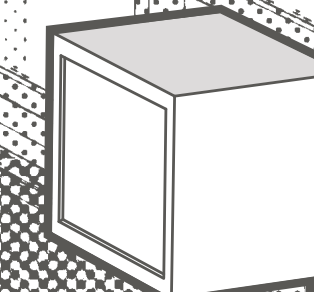
2



Window Air Conditioners

Window ACs cool rooms unevenly, are often noisy, and prevent occupants from making full use of their windows.

3



I'm loving this new air conditioning system — I have my window back, and I can put my furniture wherever I want to.